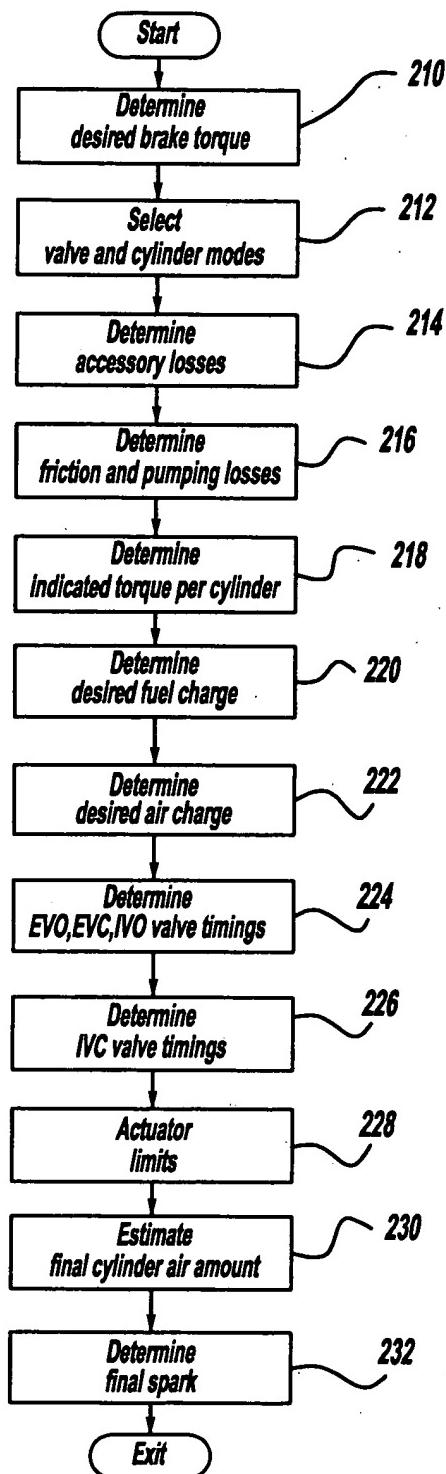
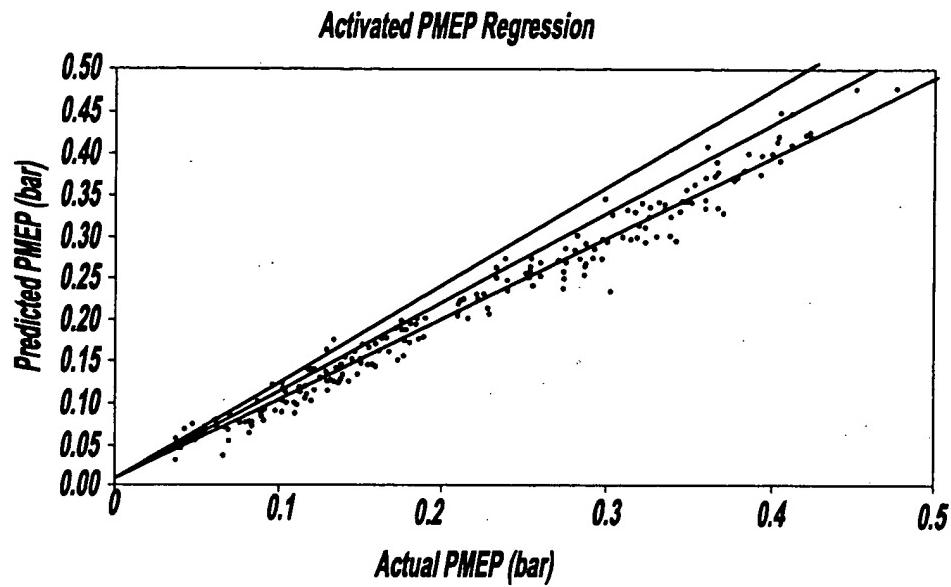


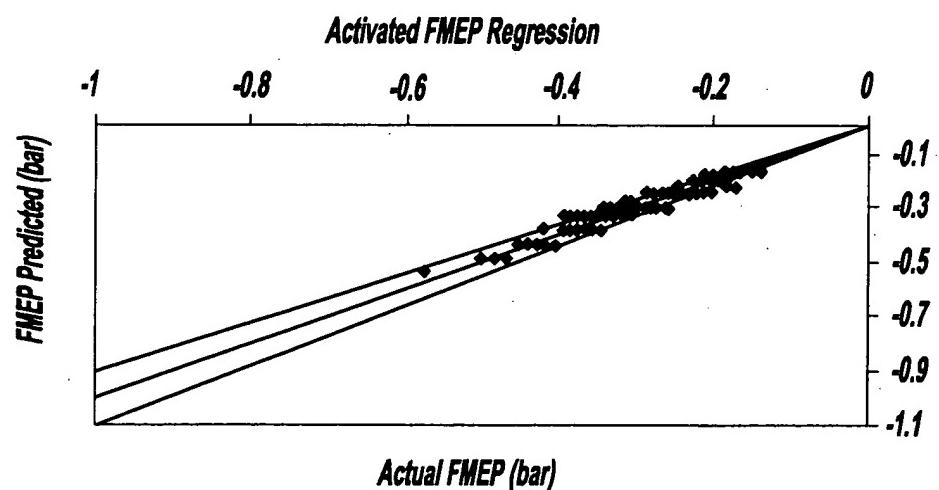
FIG - 1



**FIG - 2**

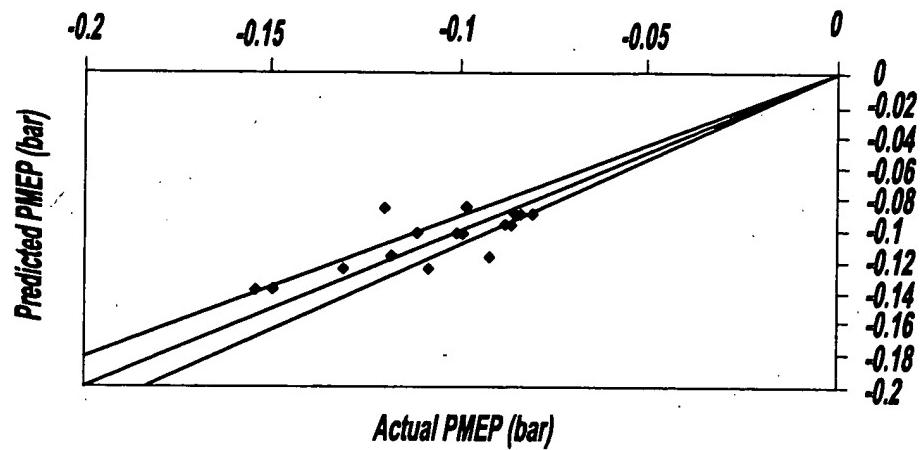


**FIG - 3**



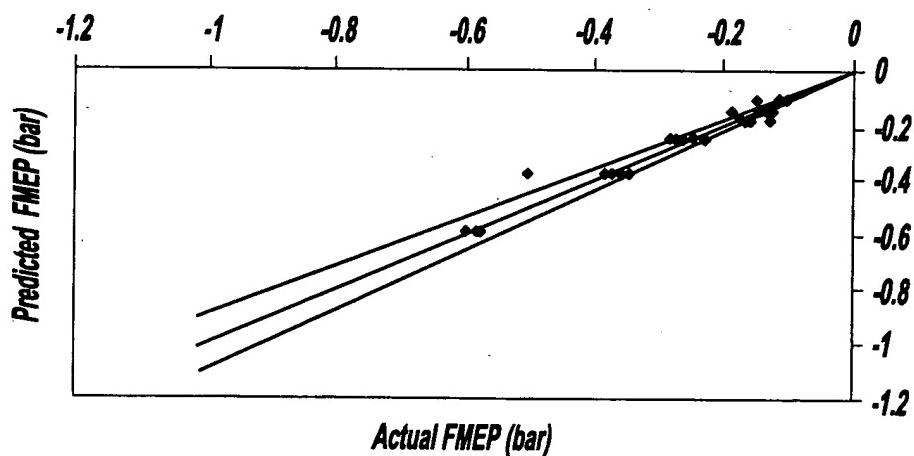
**FIG - 4**

*Deactivated PMEP Regression*



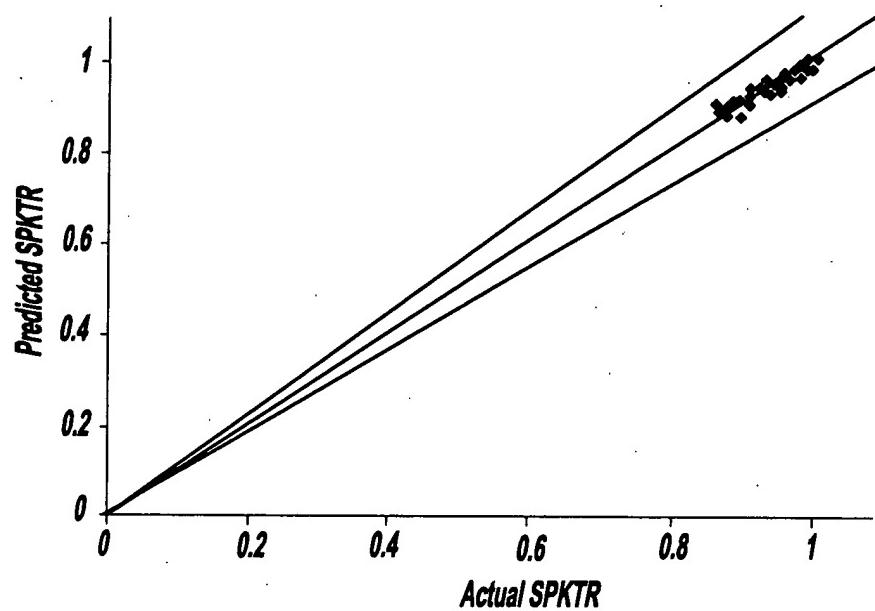
**FIG - 5**

*Deactivated FMEP Regression*

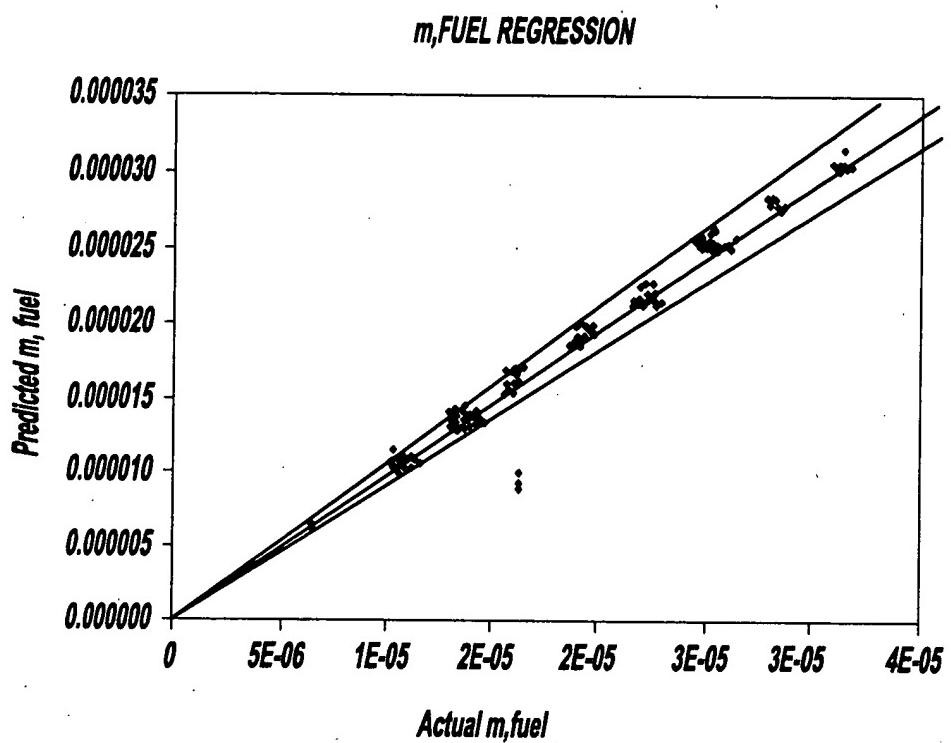


**FIG - 6**

## **Spark Retard Torque Reduction Regression**

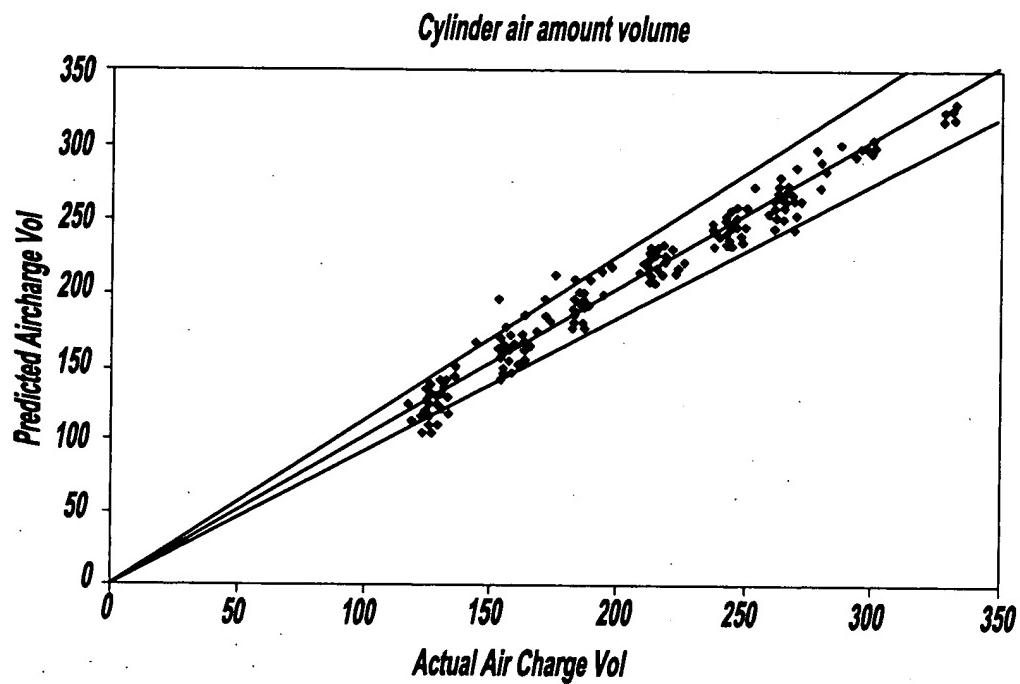


**FIG - 7**

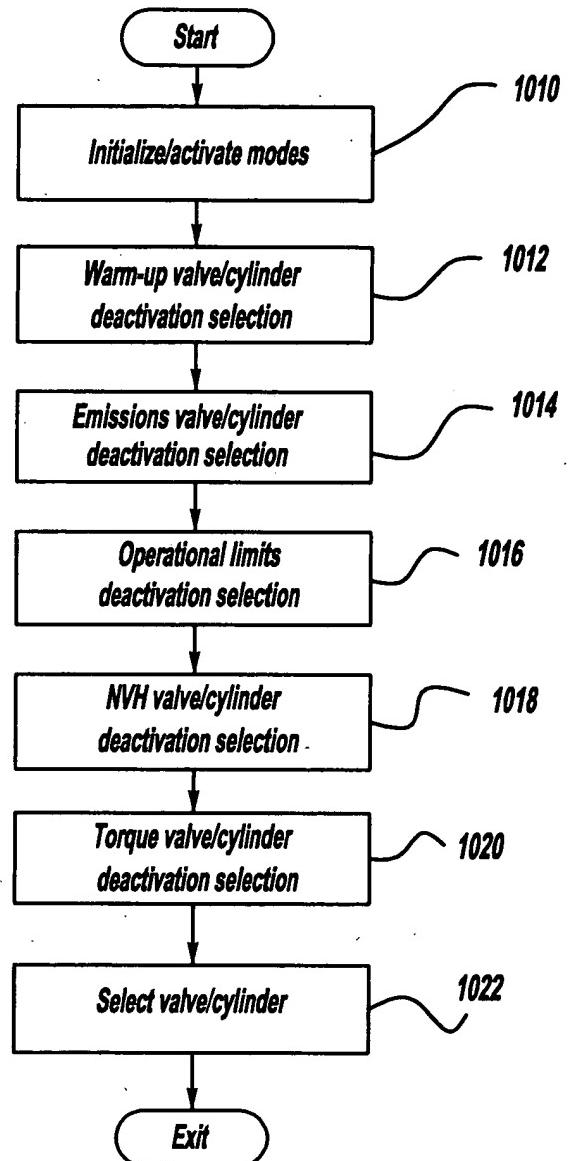


**FIG - 8**

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**FIG - 9**



**FIG - 10**

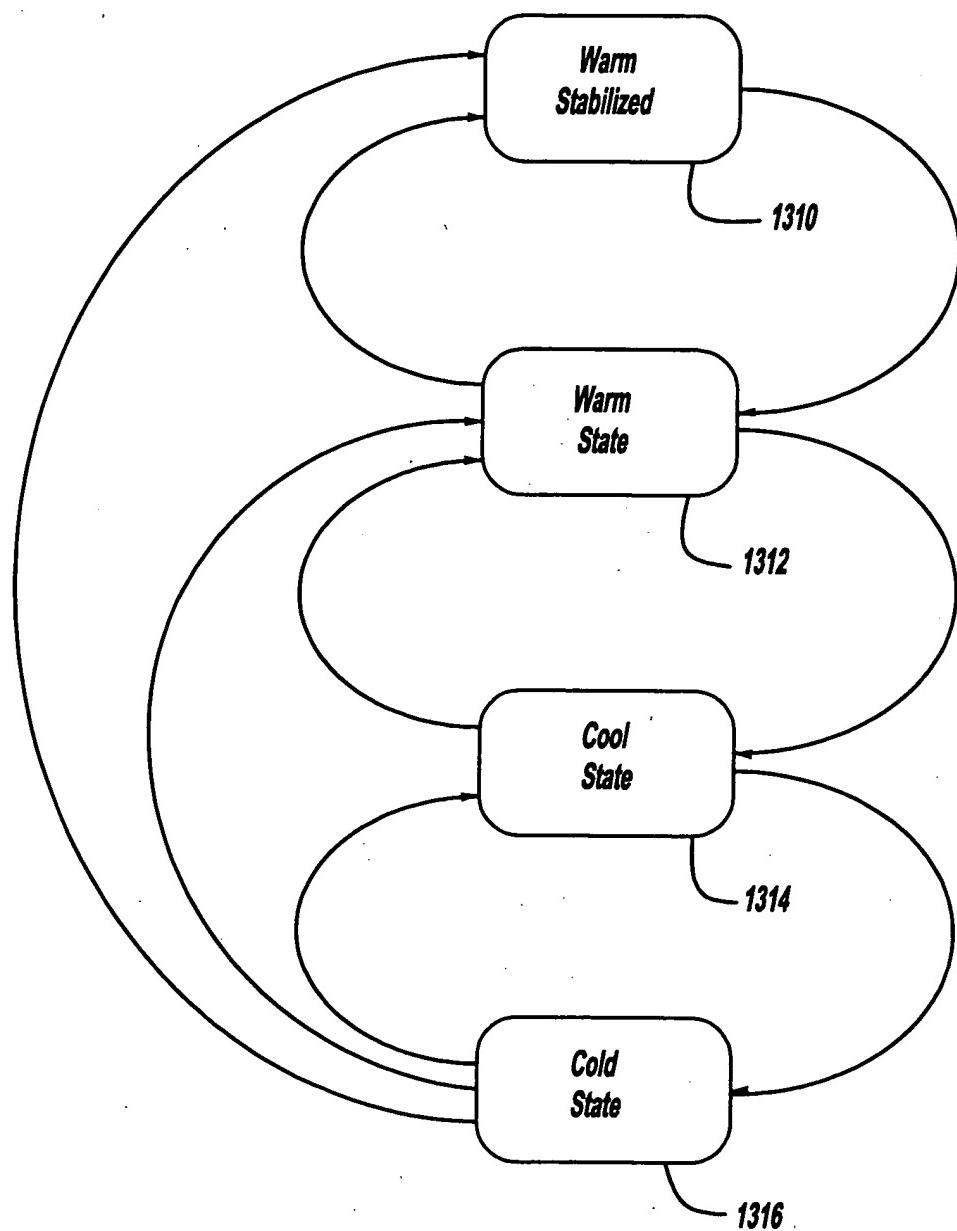
	COLUMN 0	COLUMN 3		
V2	1	1	1	1
12-STROKE	1	1	1	1
V4	1	1	1	1
V8	1	1	1	1
DIDE DIAE AIDE AIAE				
DECREASING TORQUE →				

**FIG - 11**

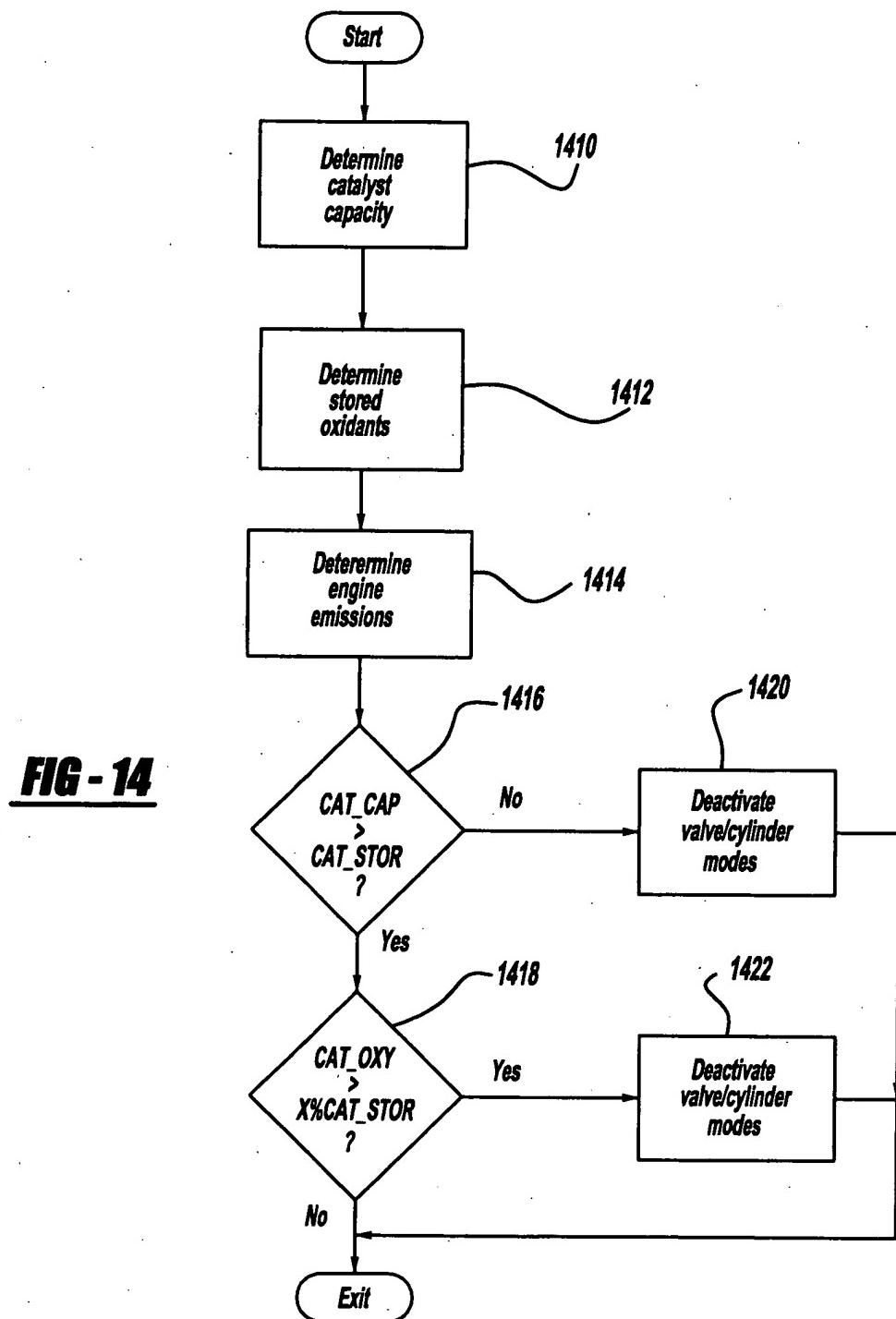
	COLUMN 0	COLUMN 3		
V2	0	0	0	0
12-STROKE	0	0	0	0
V4	1	1	0	0
V8	1	1	1	1
DIDE DIAE AIDE AIAE				
DECREASING TORQUE →				

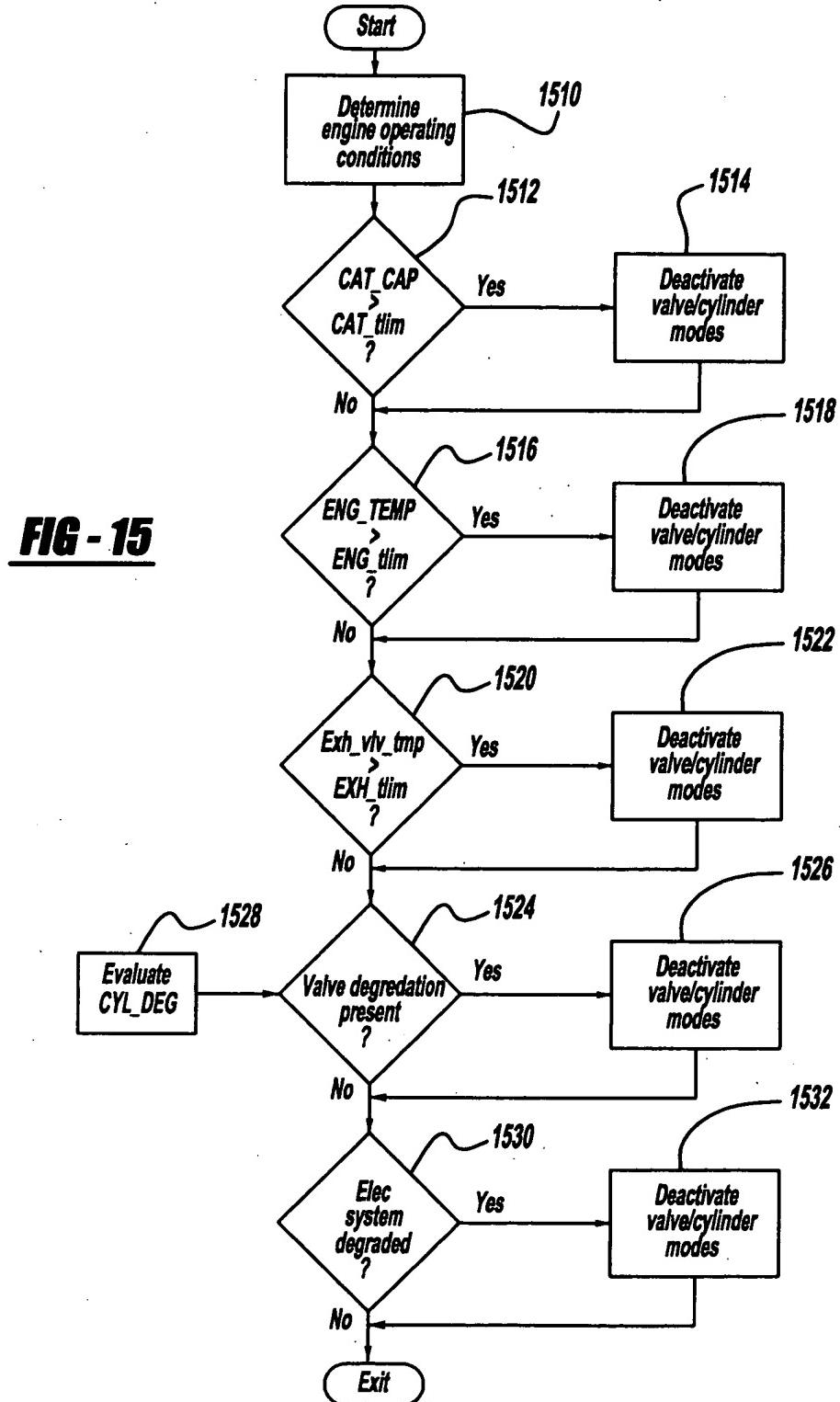
**FIG - 12**

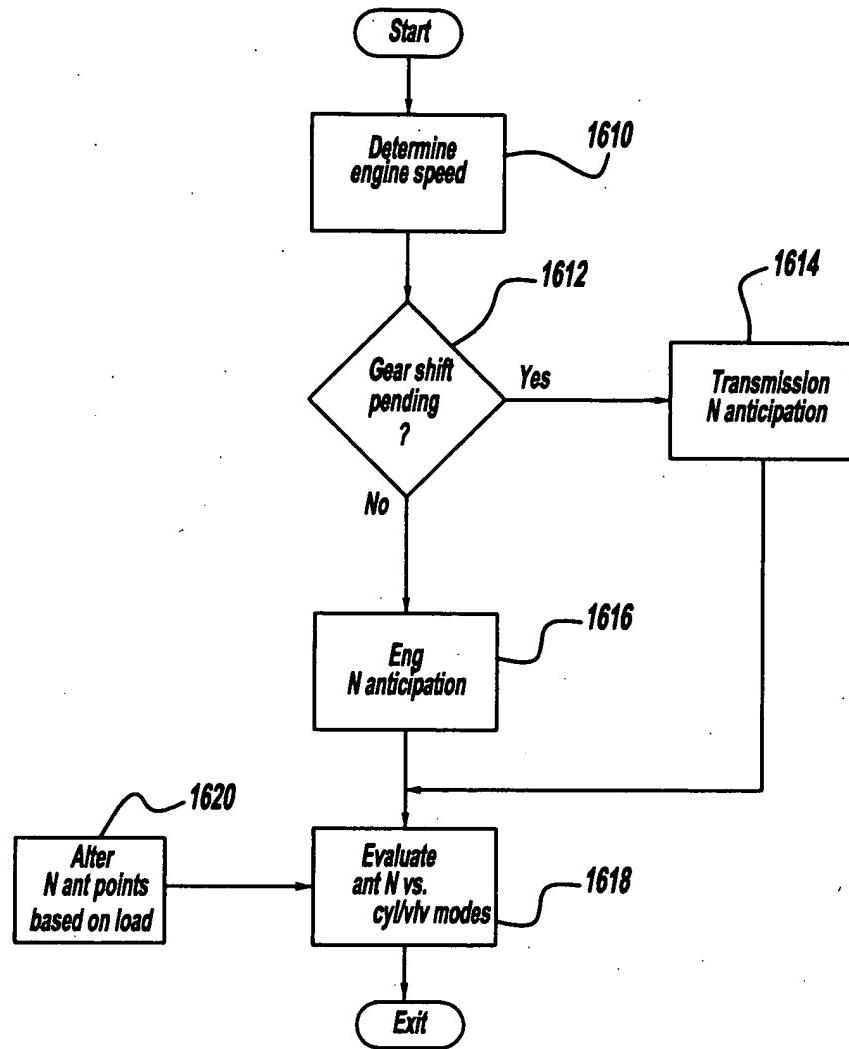
10/60



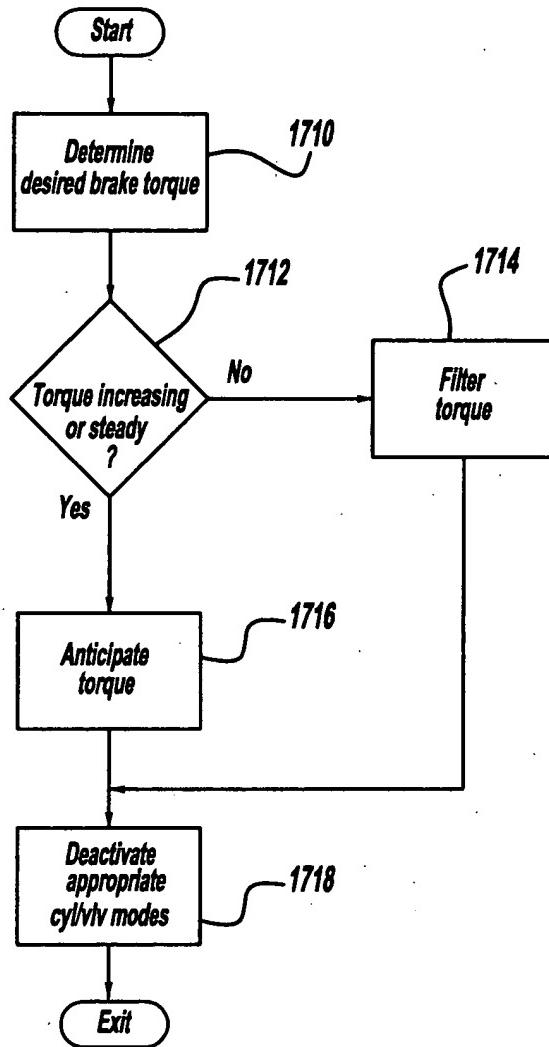
**FIG - 13**



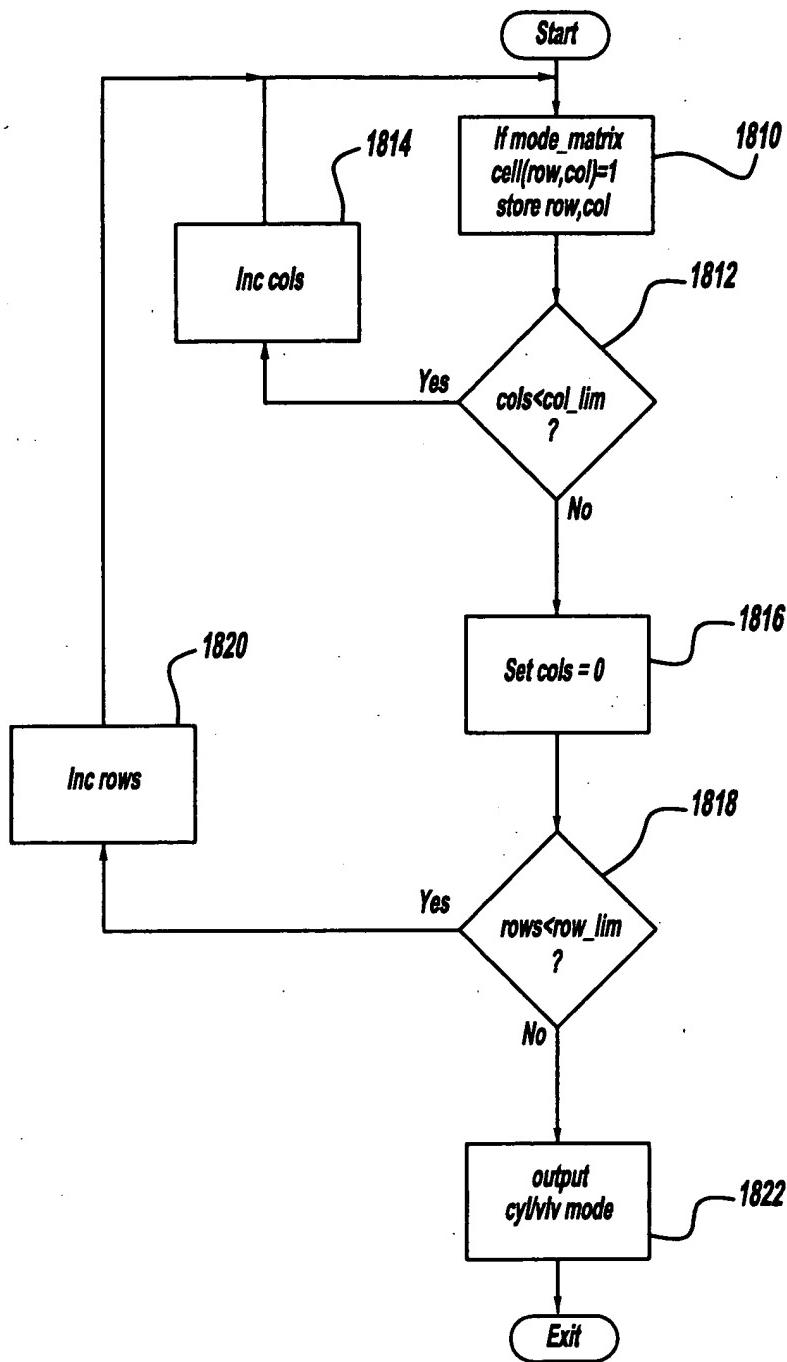


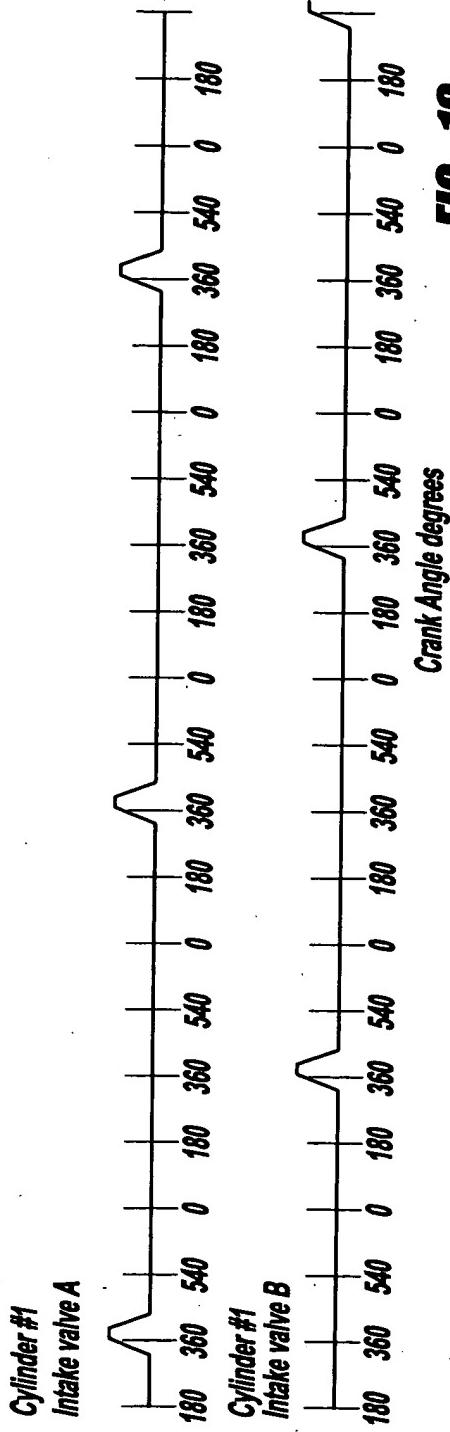


**FIG - 16**

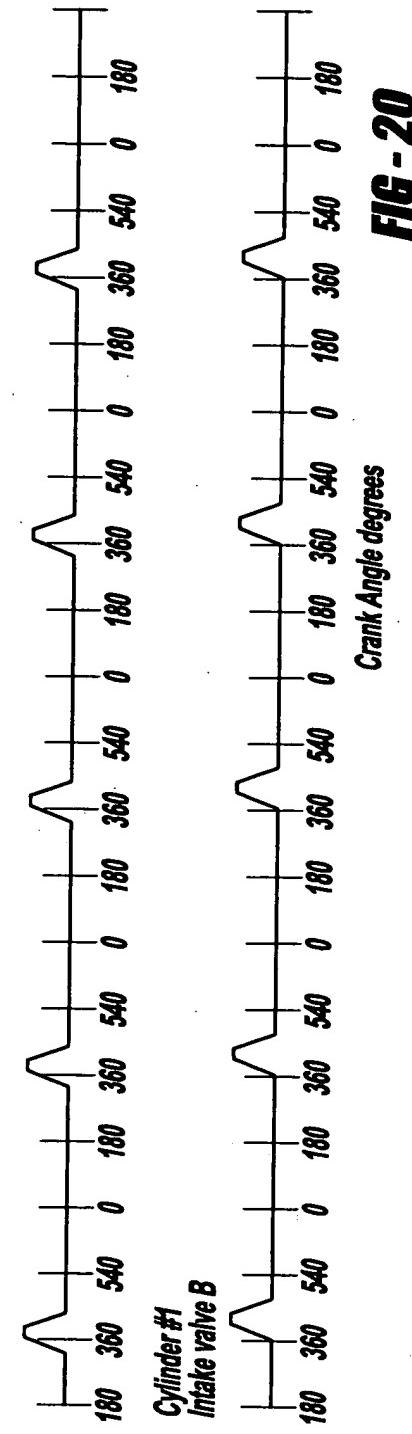


**FIG - 17**

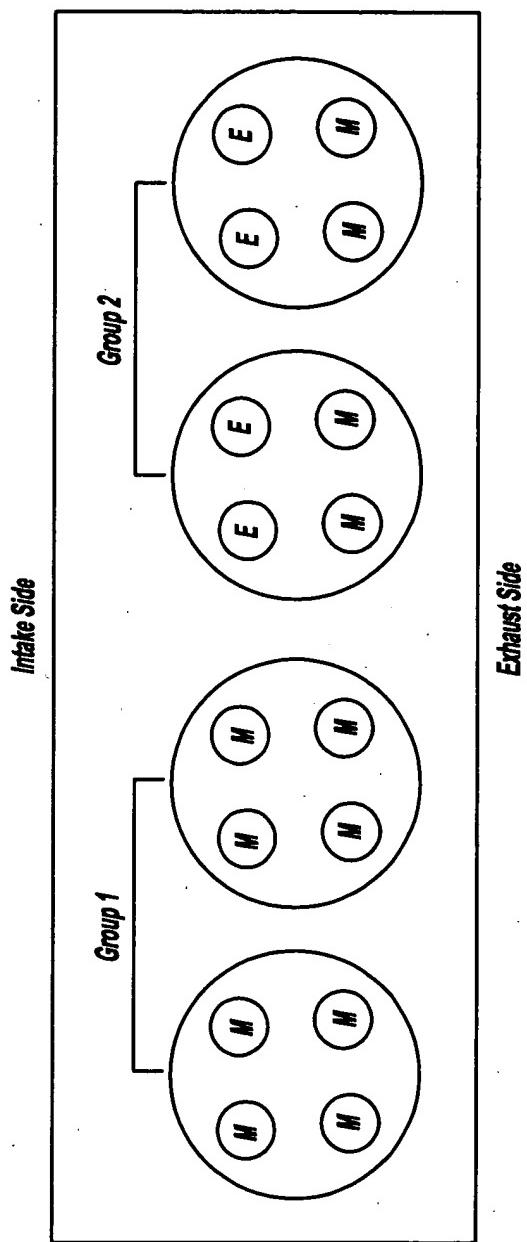
**FIG - 18**



**FIG - 19**



**FIG - 20**



**FIG-21**

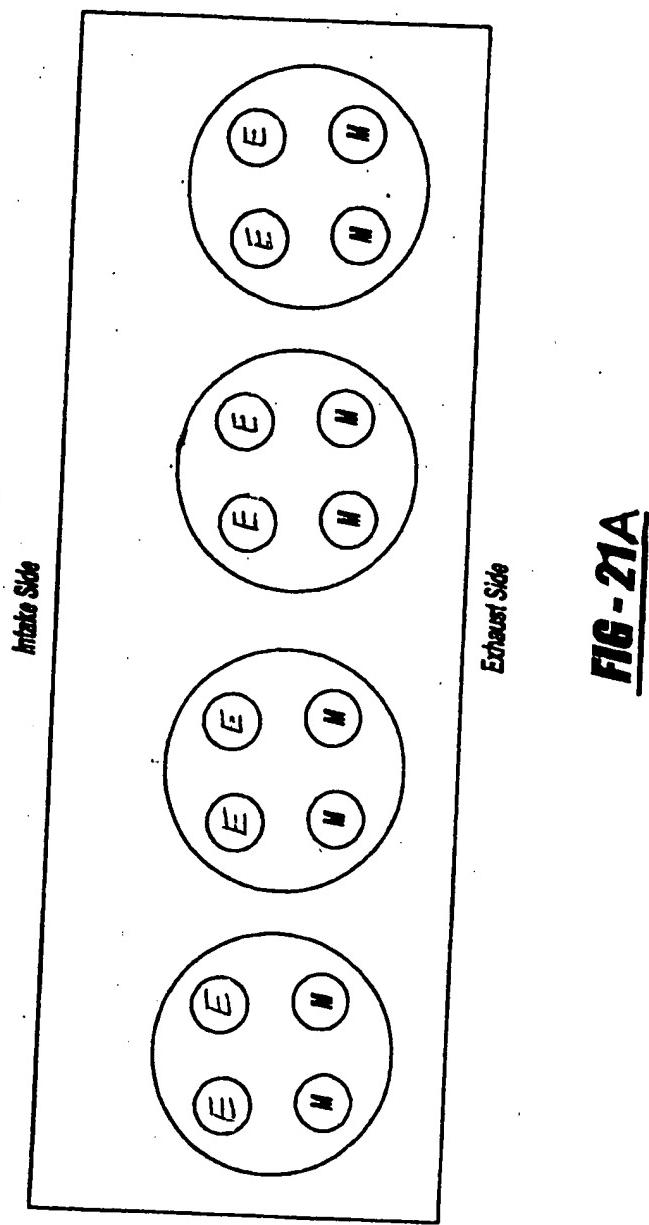
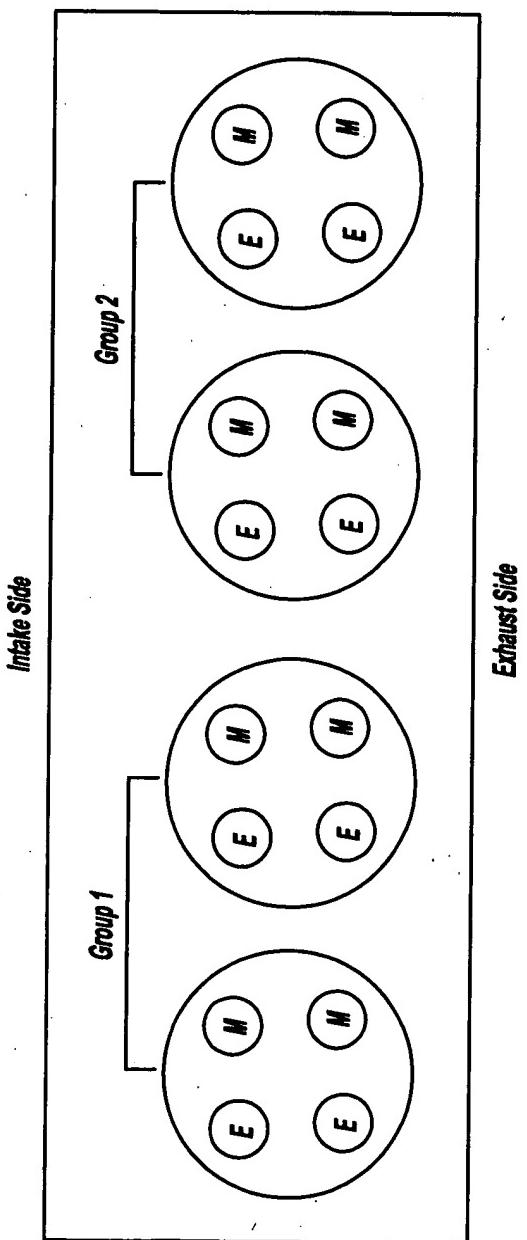


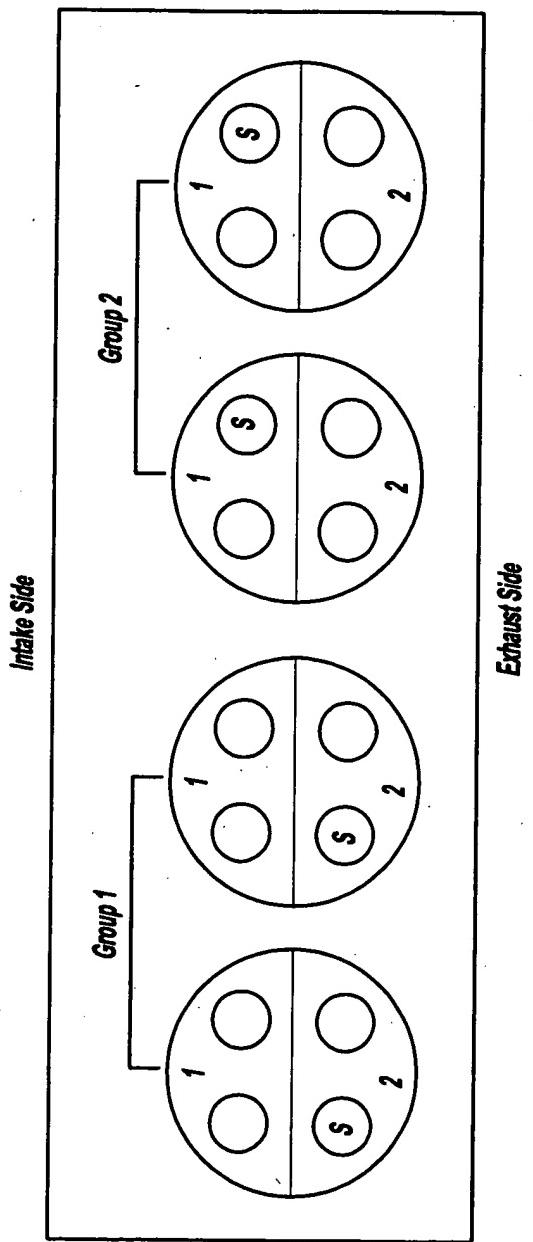
FIG - 21A

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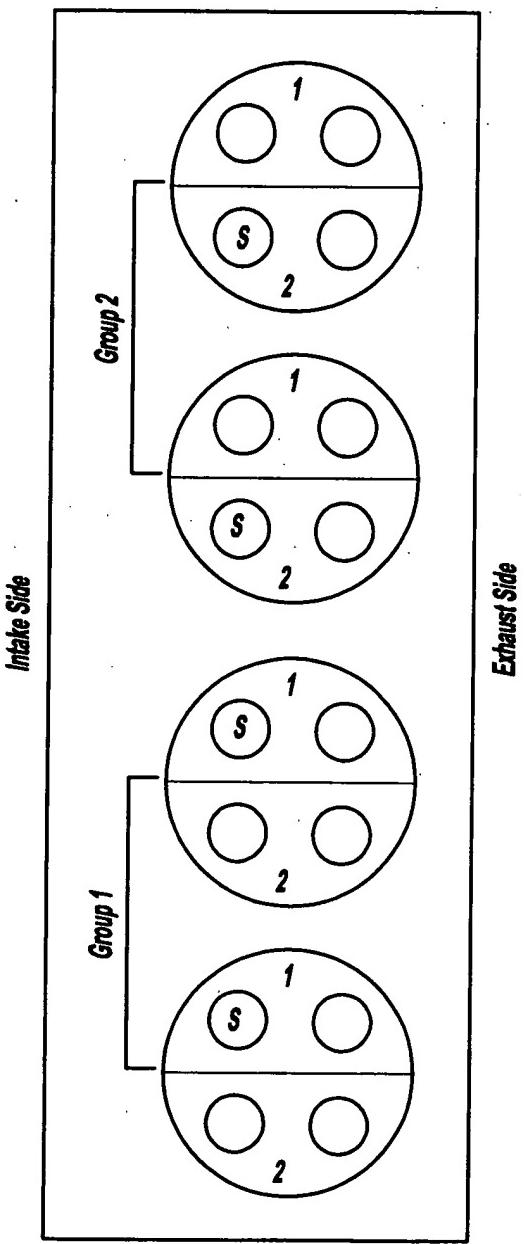


**FIG - 22**

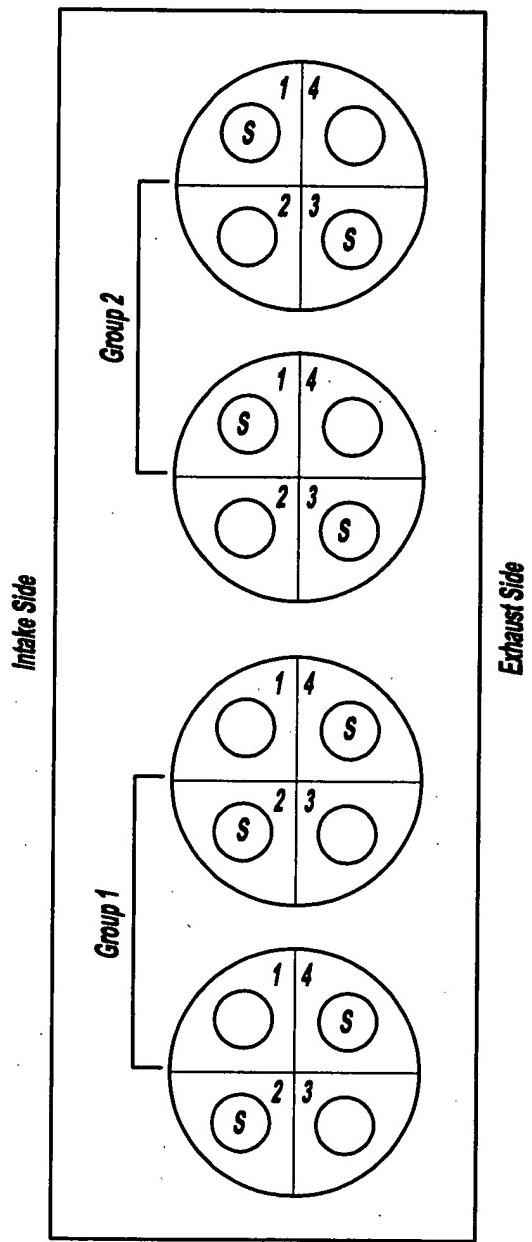
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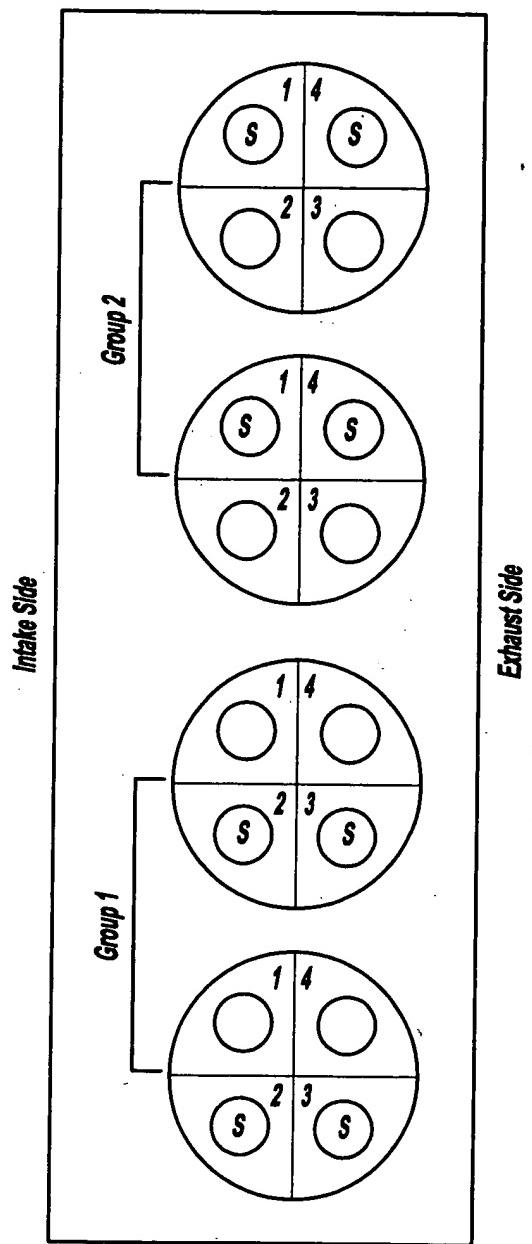
**FIG - 23**



**FIG - 24**

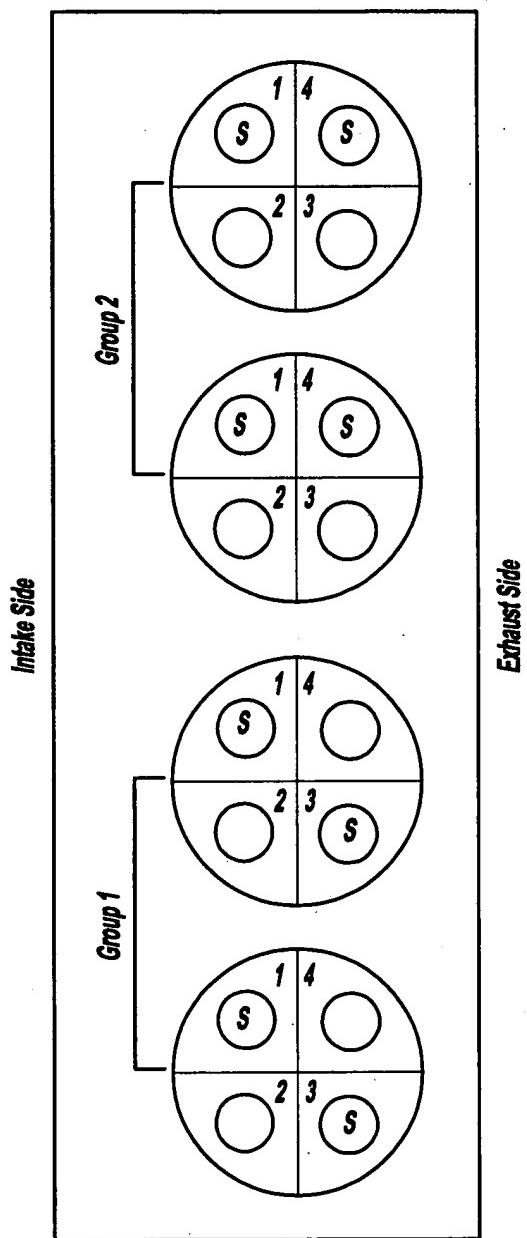


**FIG - 25**

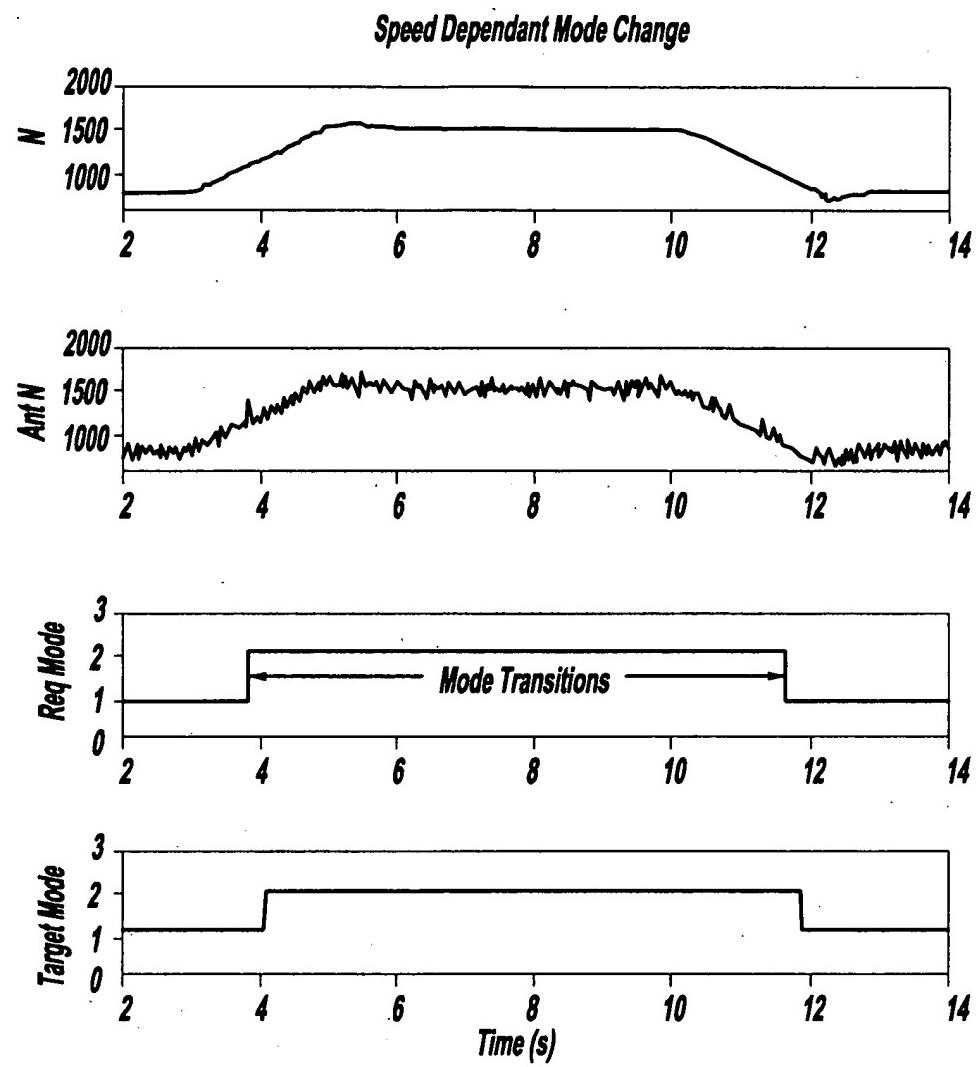


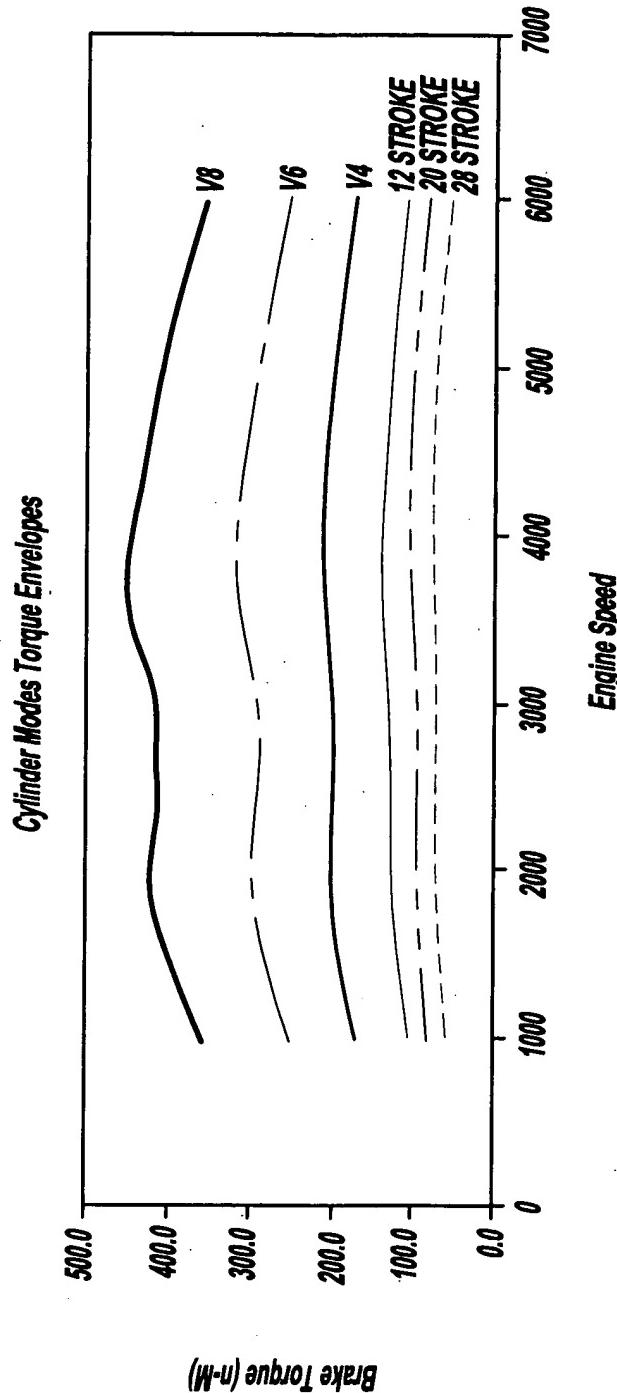
**FIG - 26**

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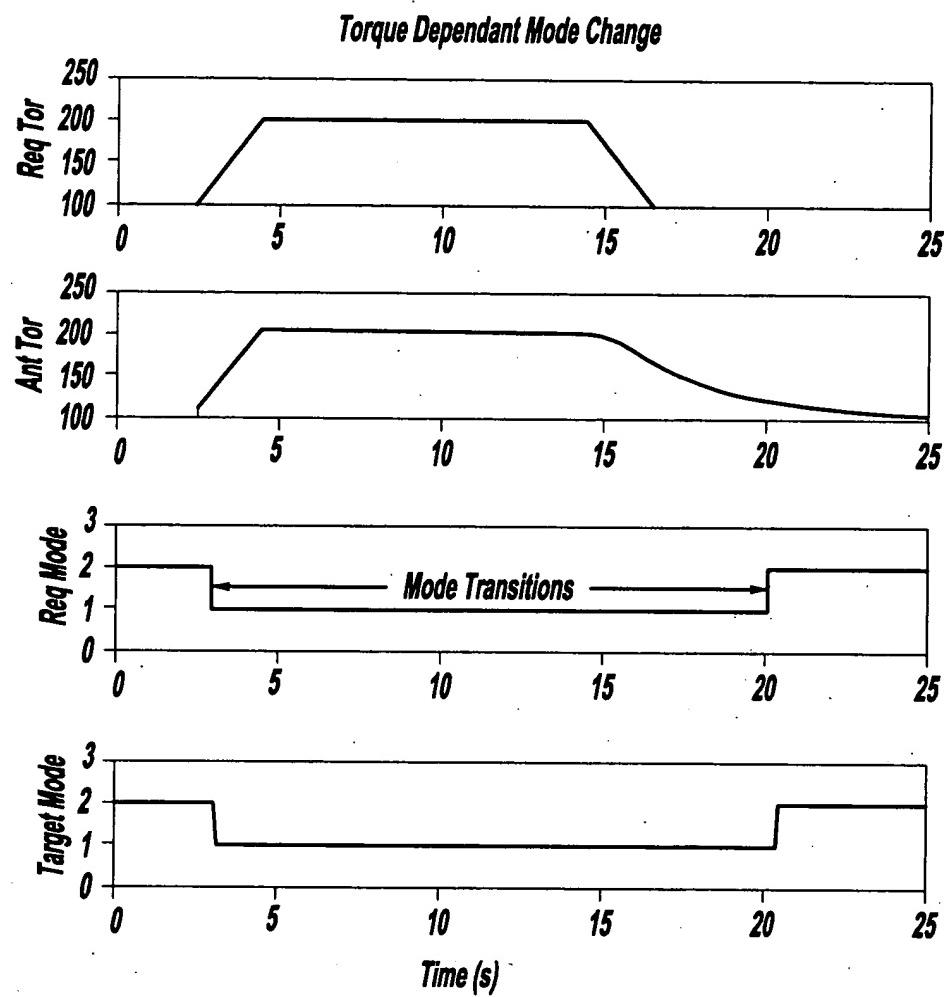


**FIG - 27**

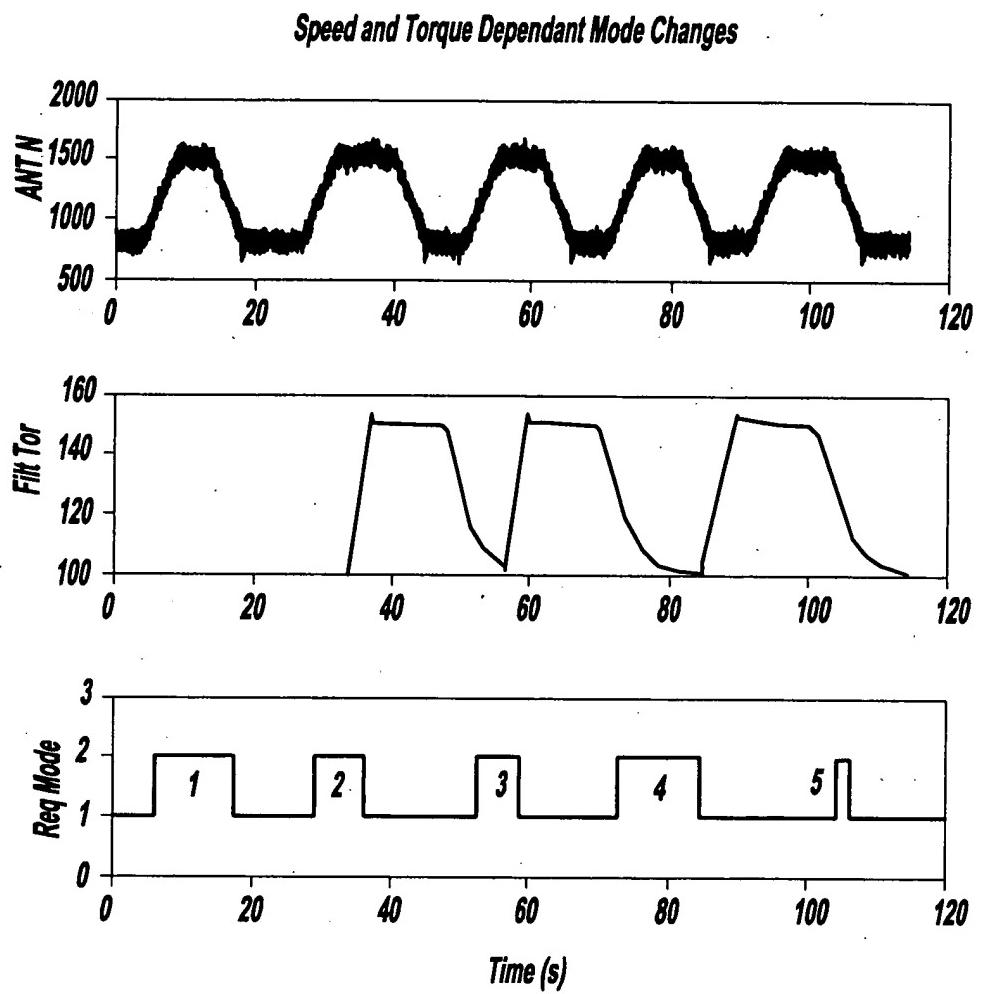
**FIG - 28**



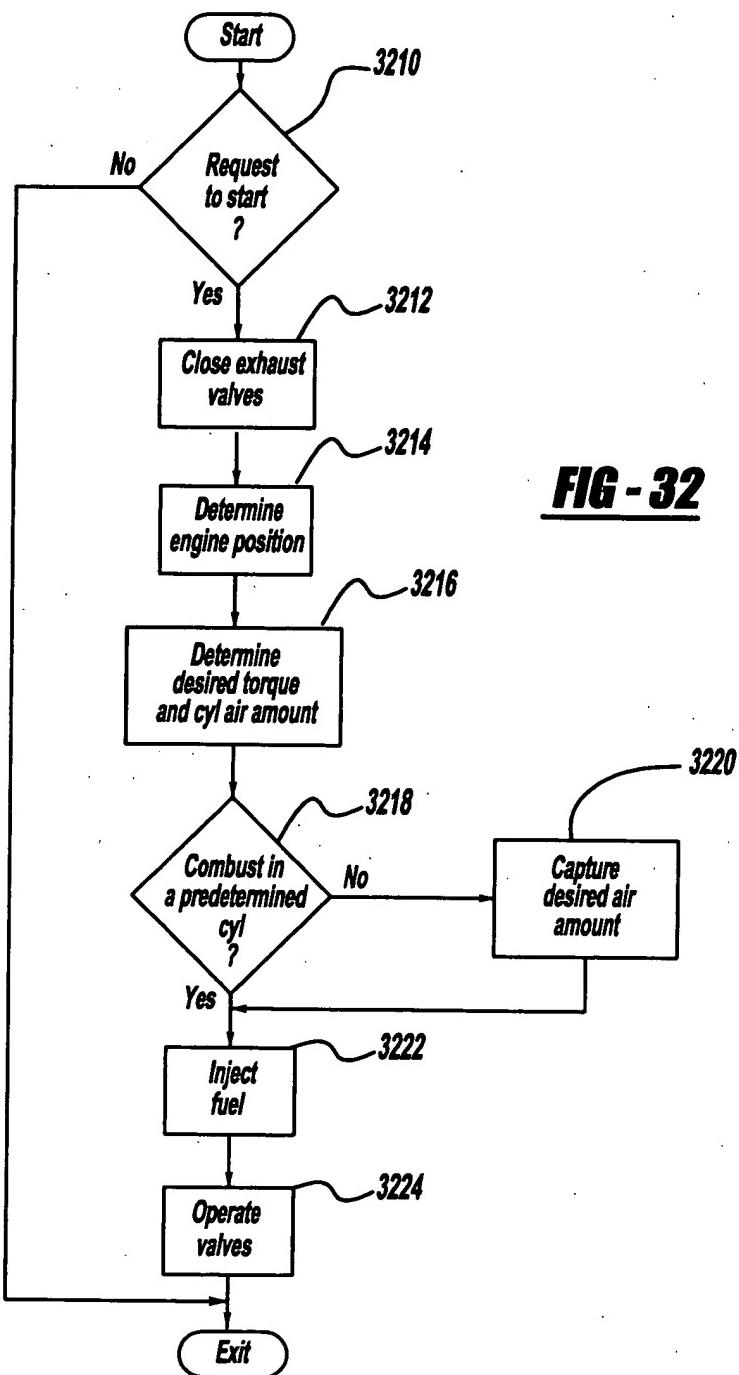
**FIG - 29**



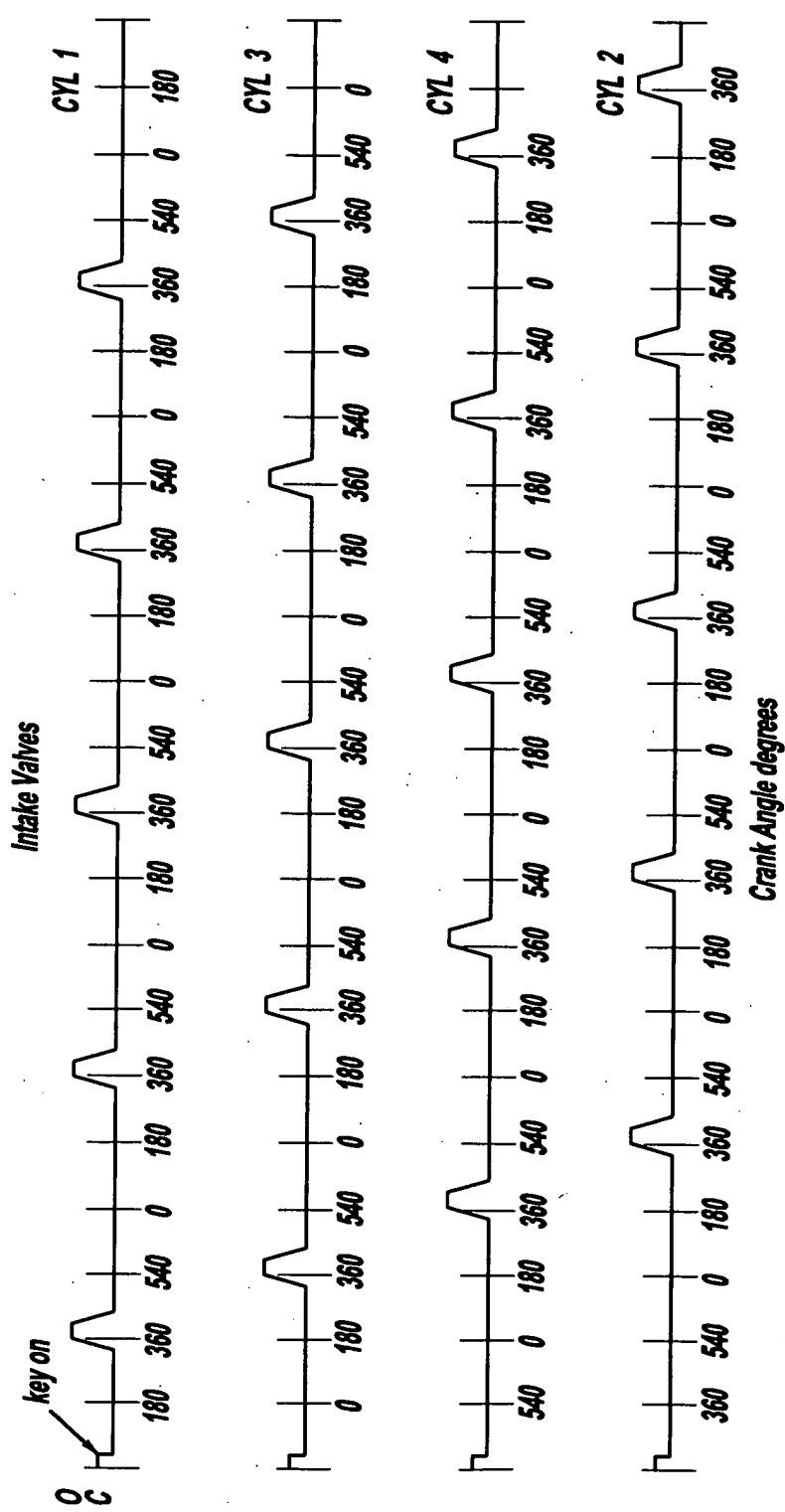
**FIG - 30**



**FIG - 31**

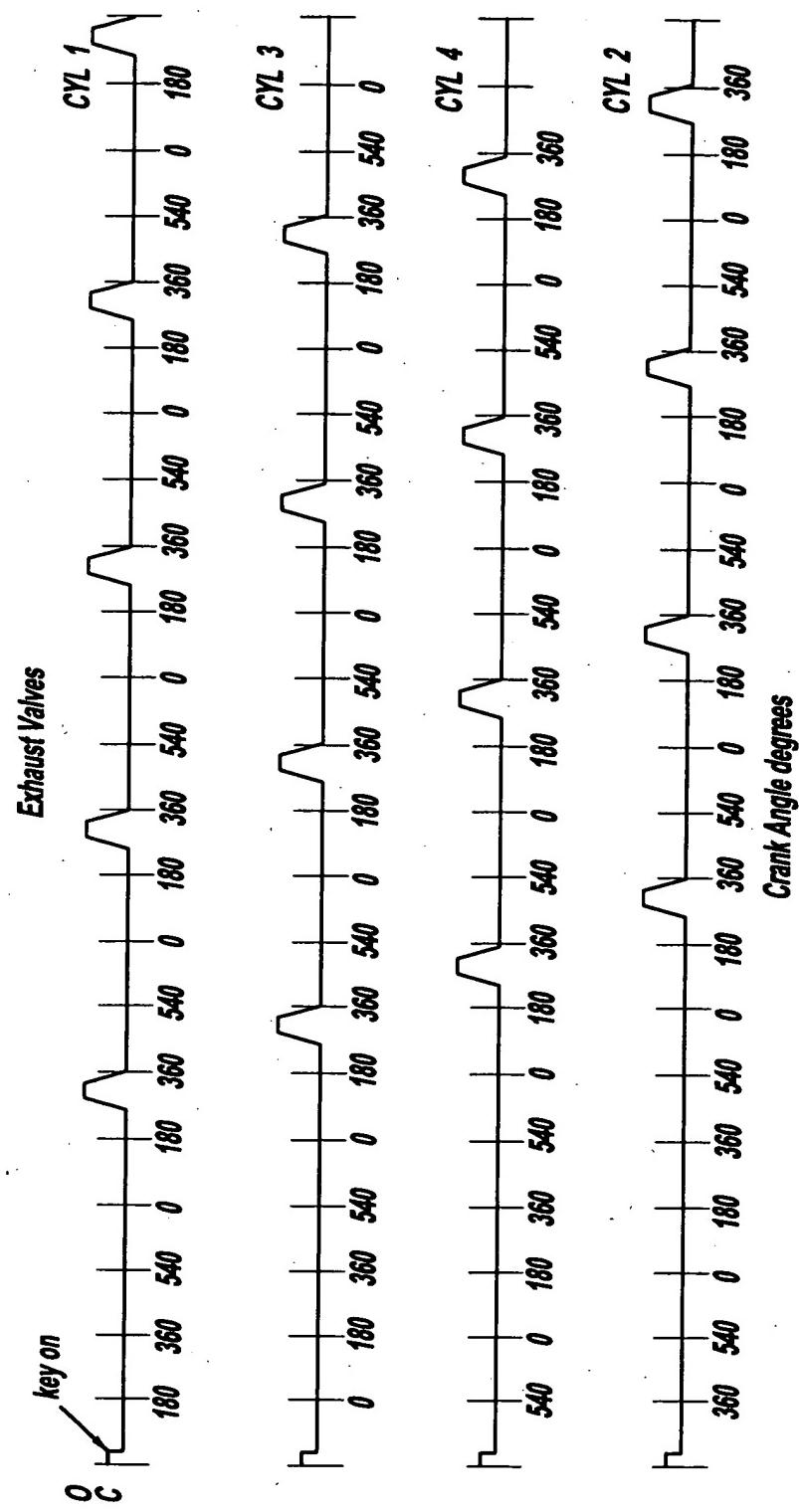


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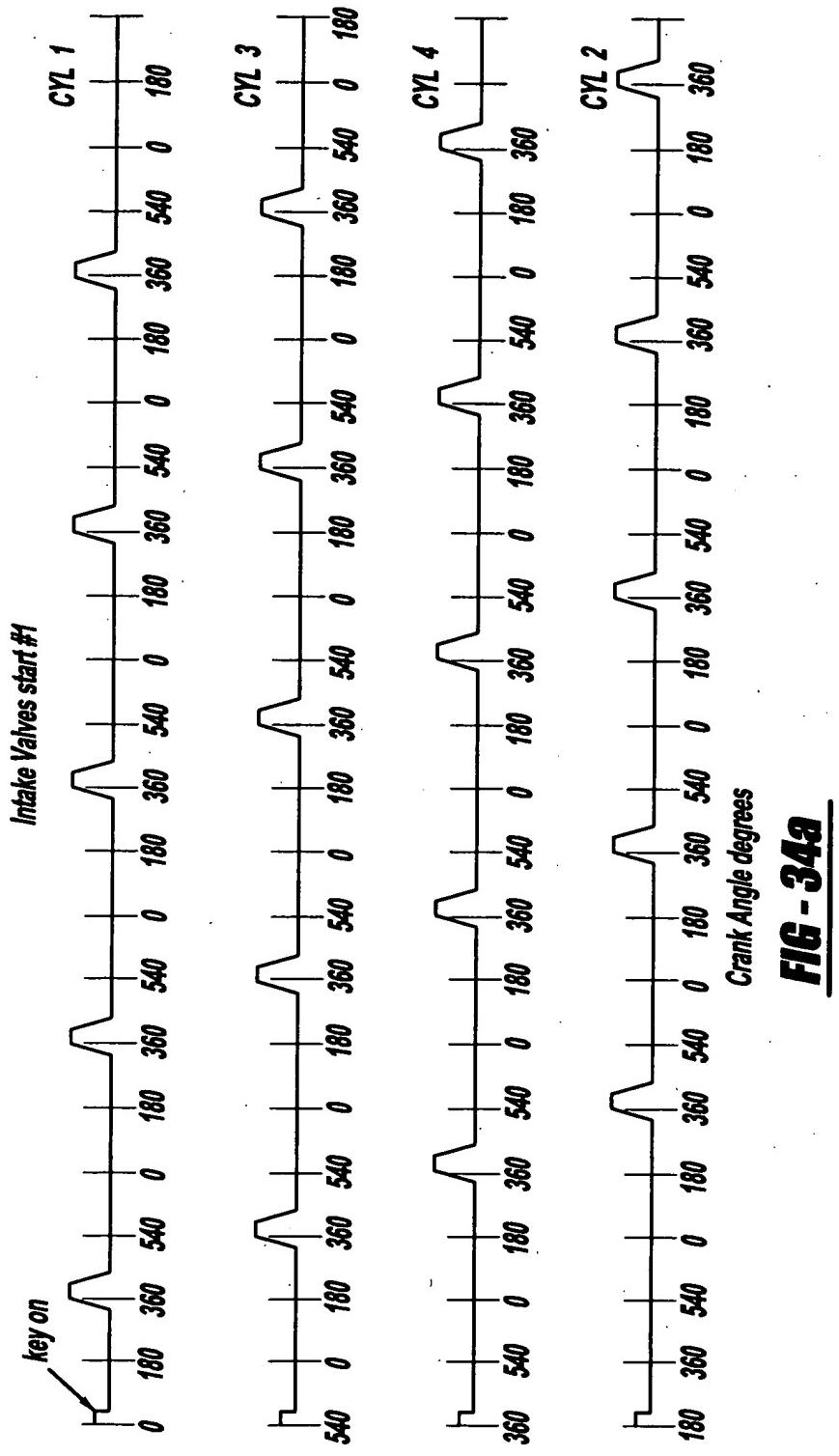
**FIG - 33a**

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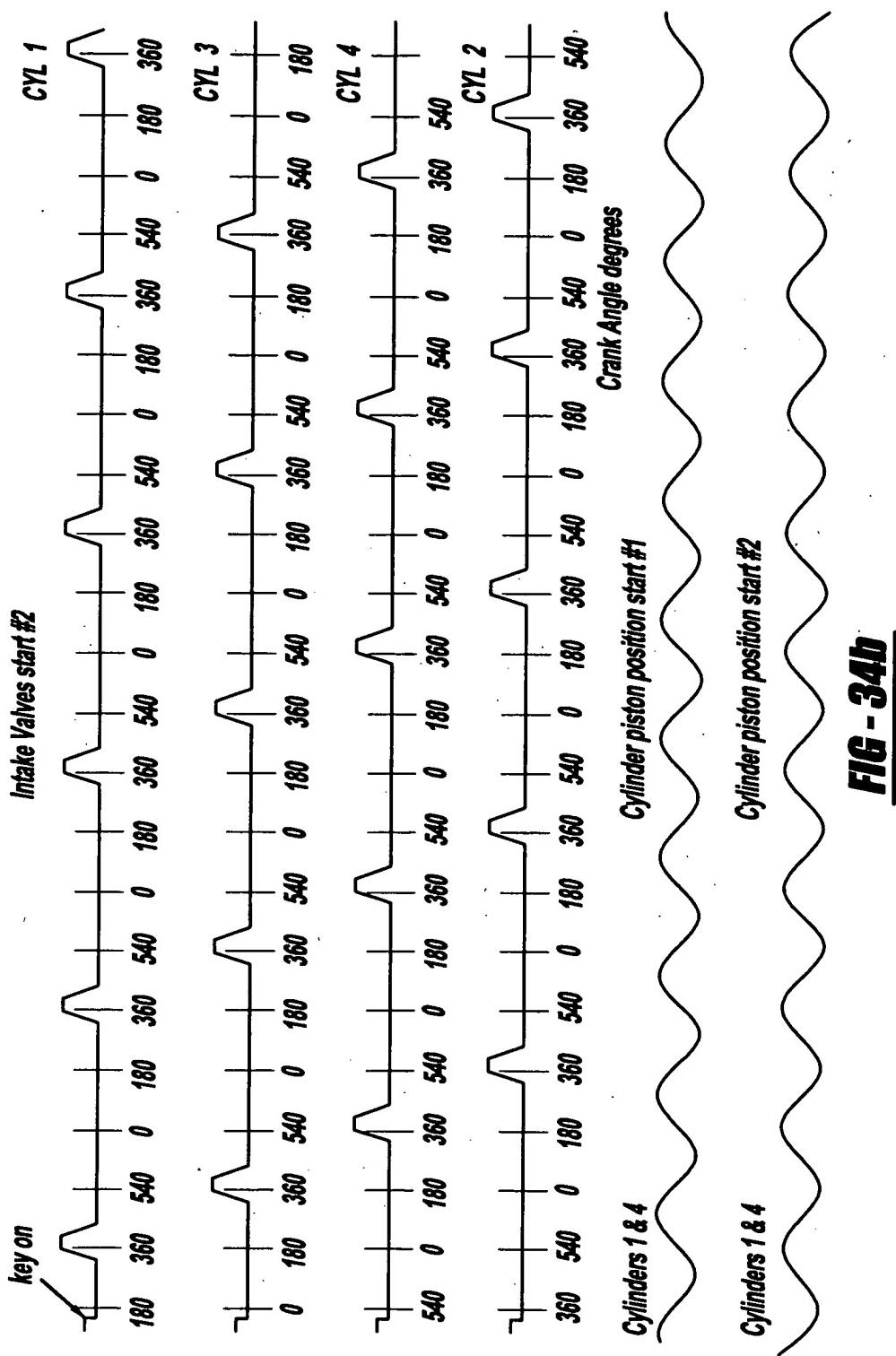


**FIG - 33b**

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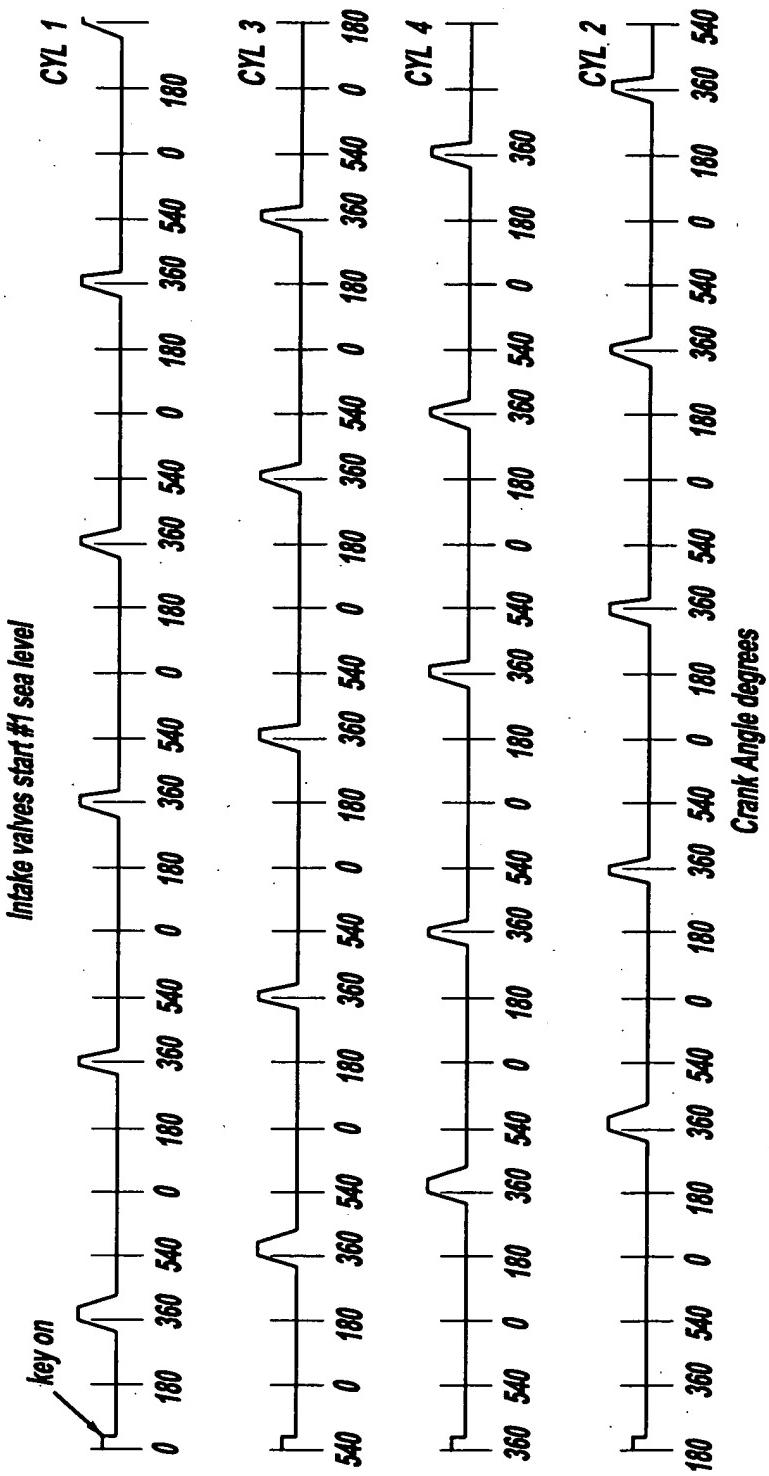
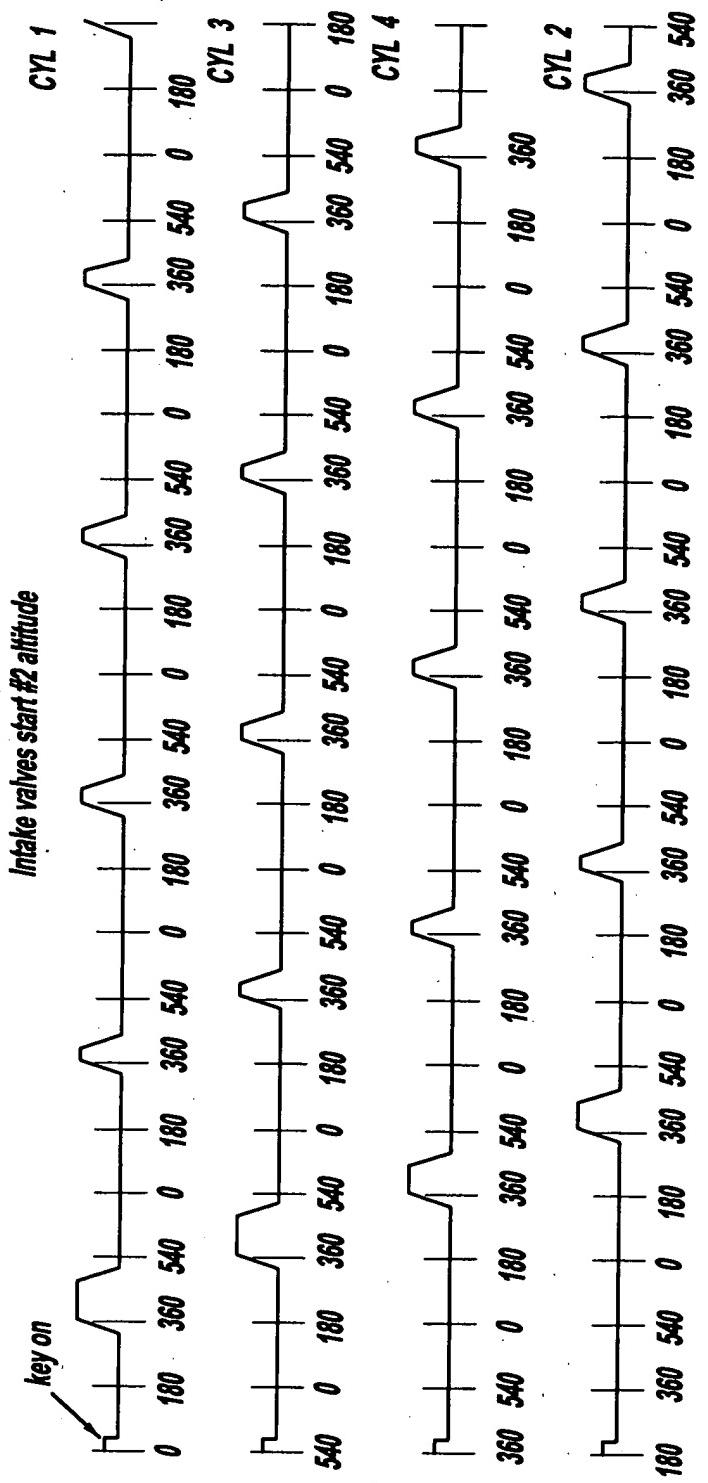
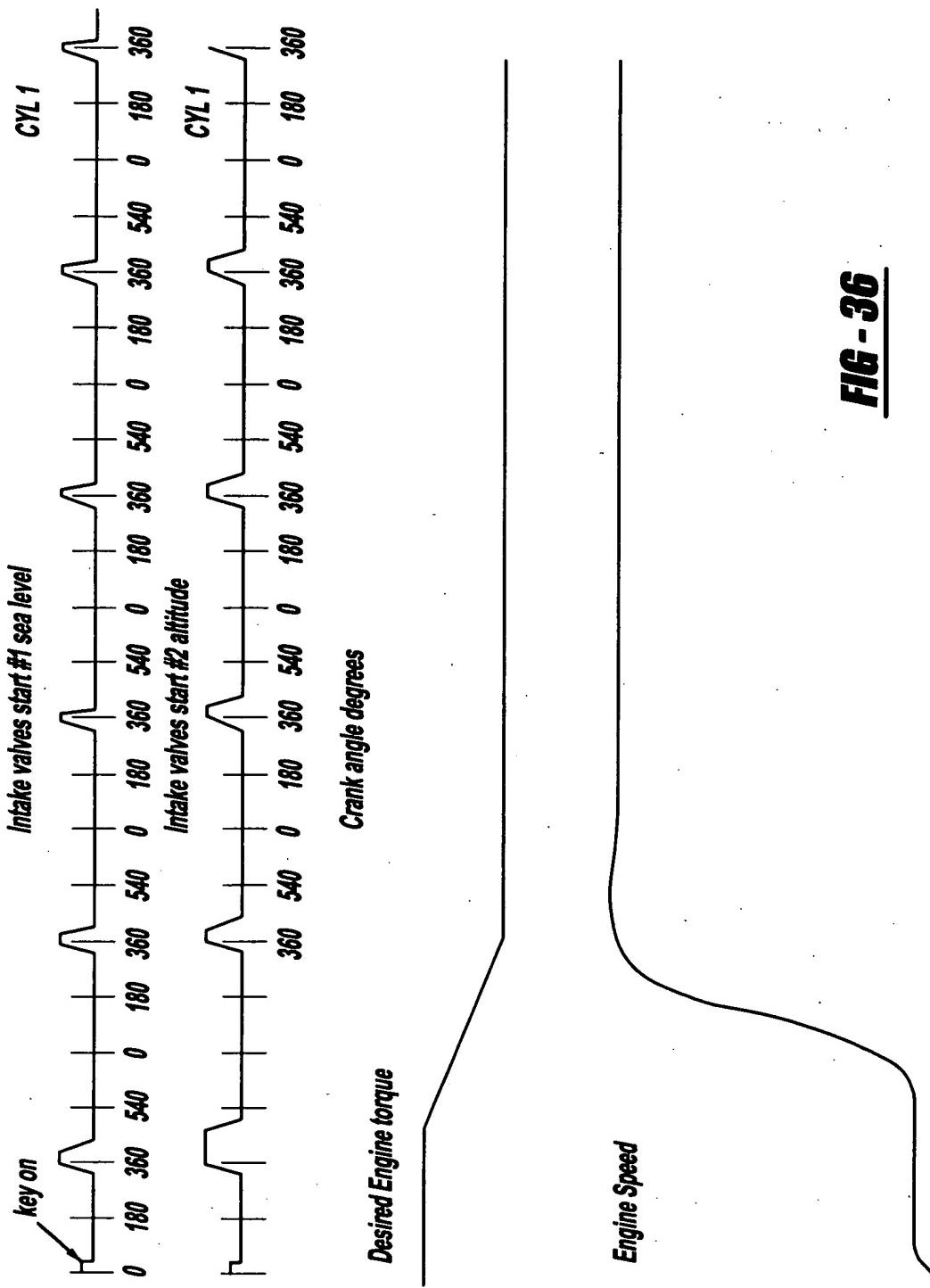
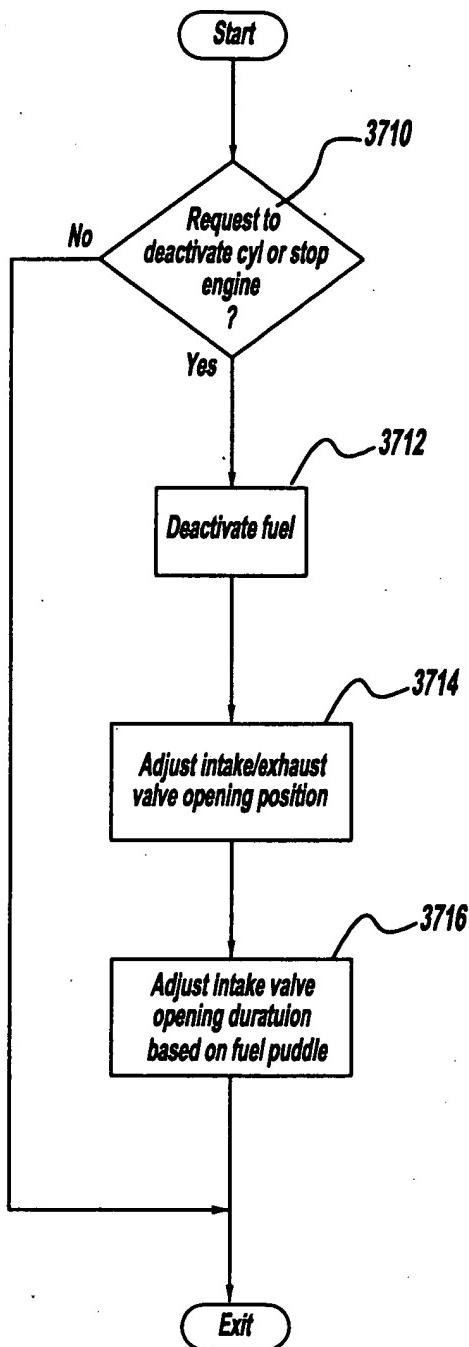


FIG - 35a



**FIG - 35b**

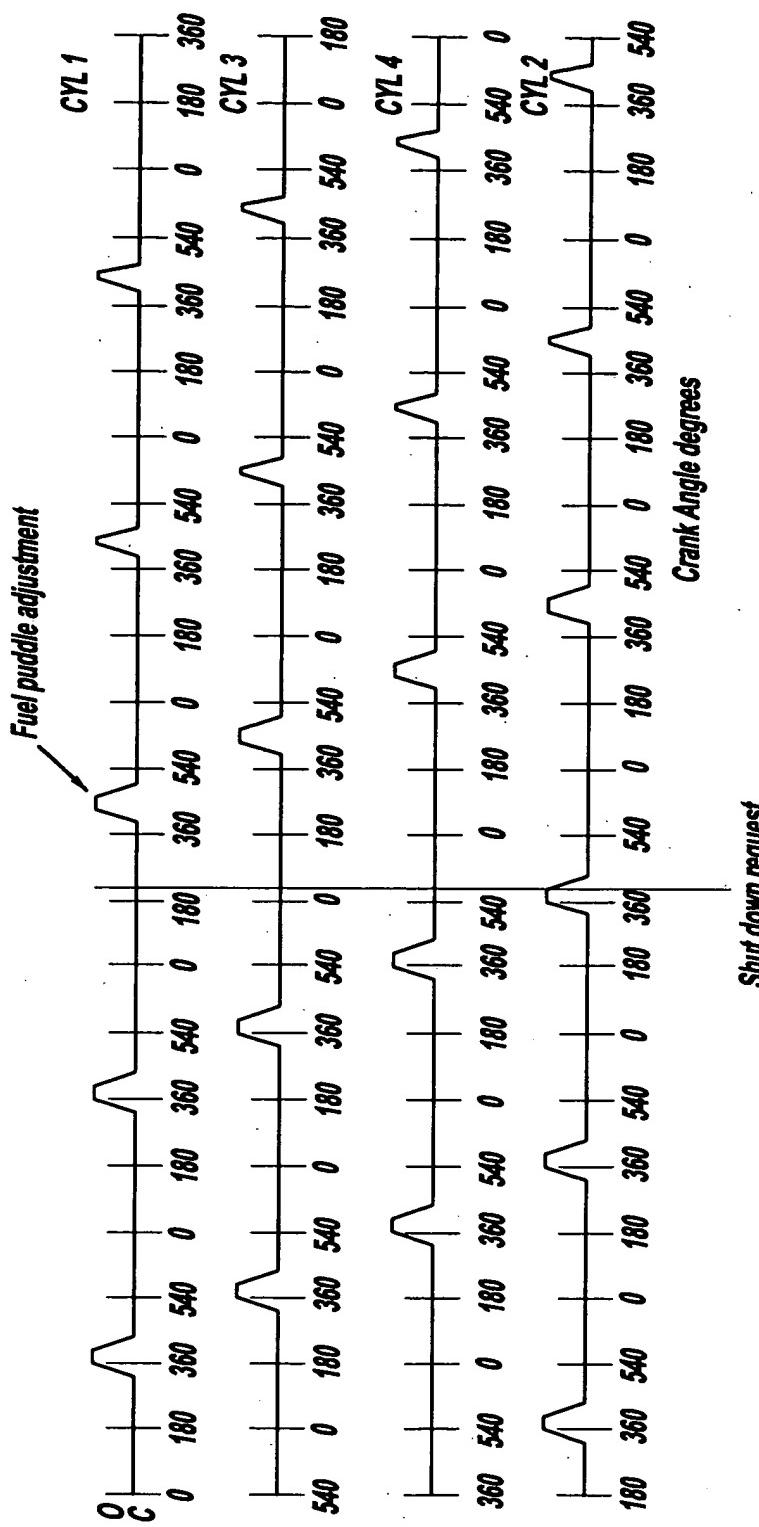




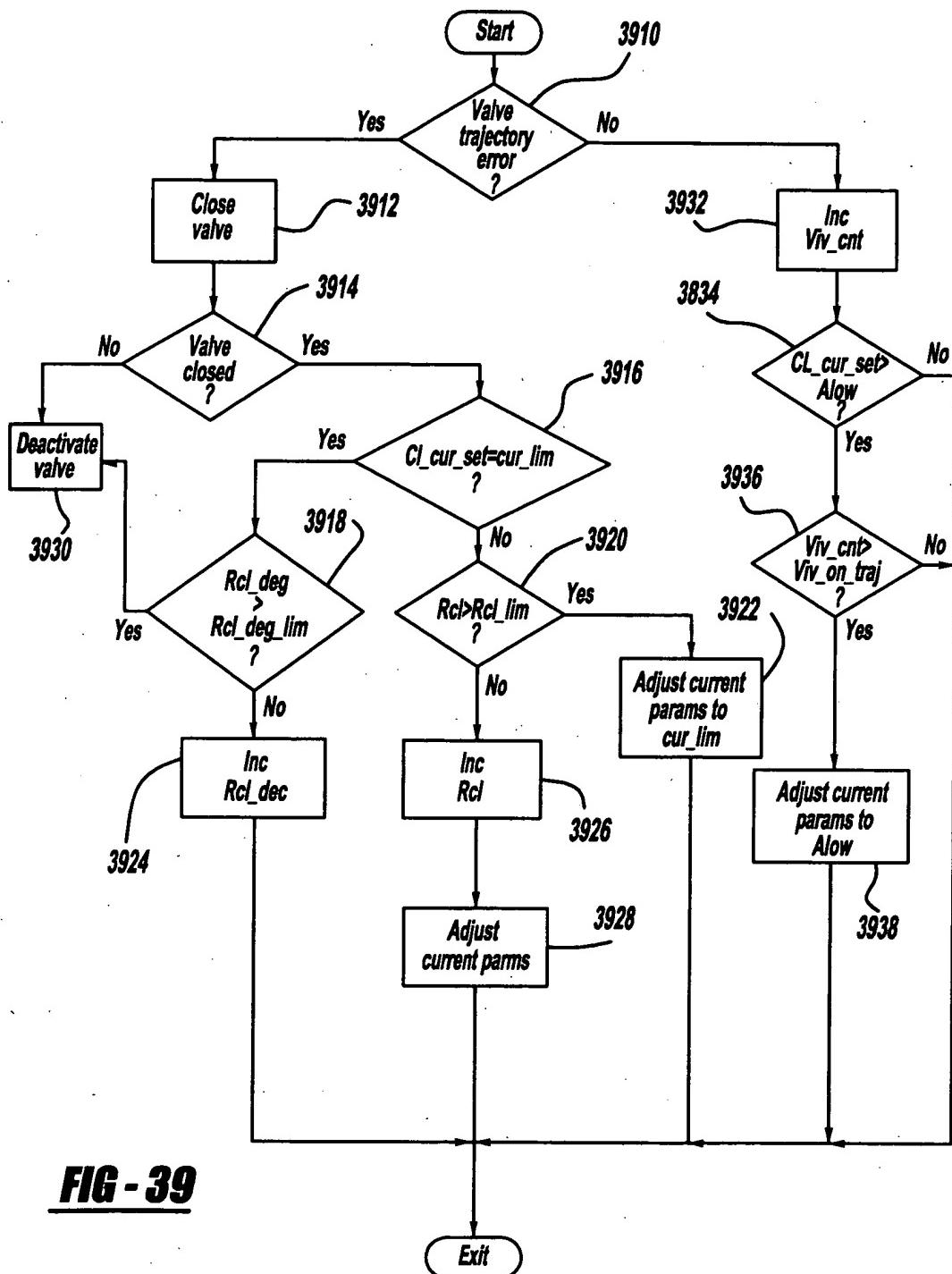
**FIG - 37**

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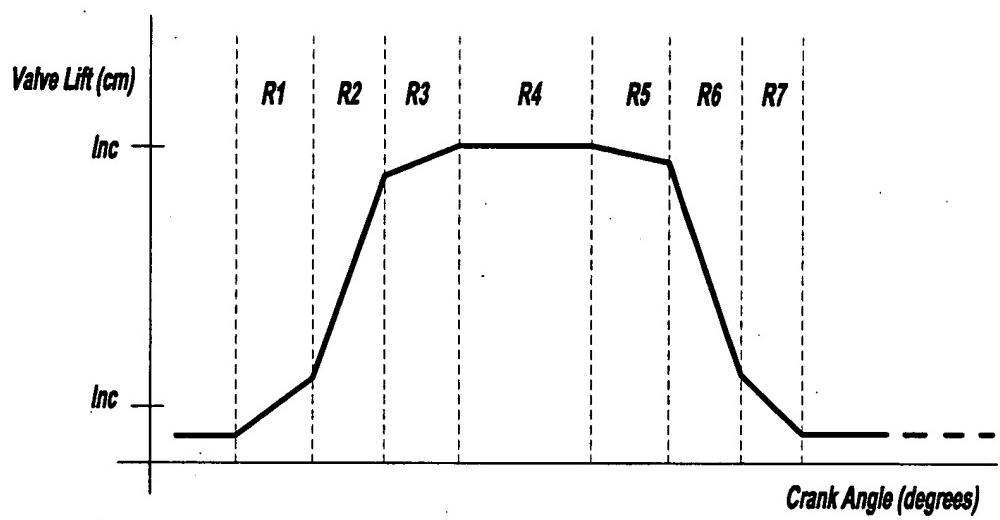
*Intake valve timing during engine shut down*



**FIG - 38**

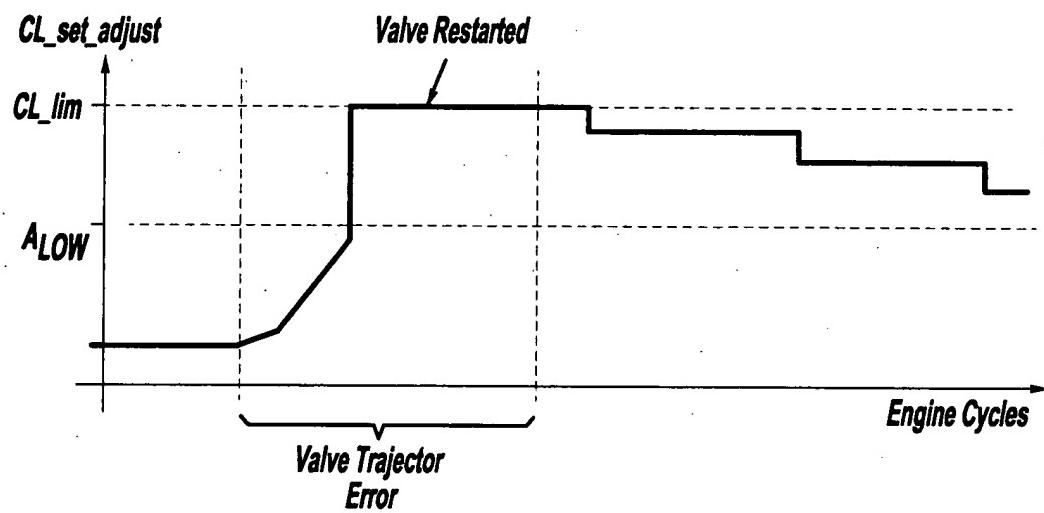


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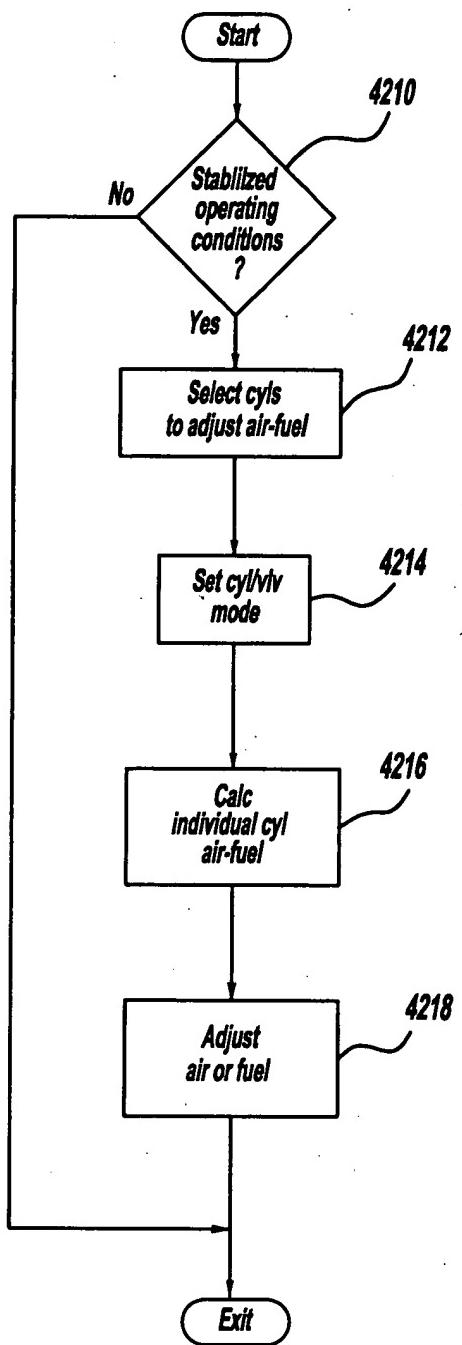


**FIG - 40**

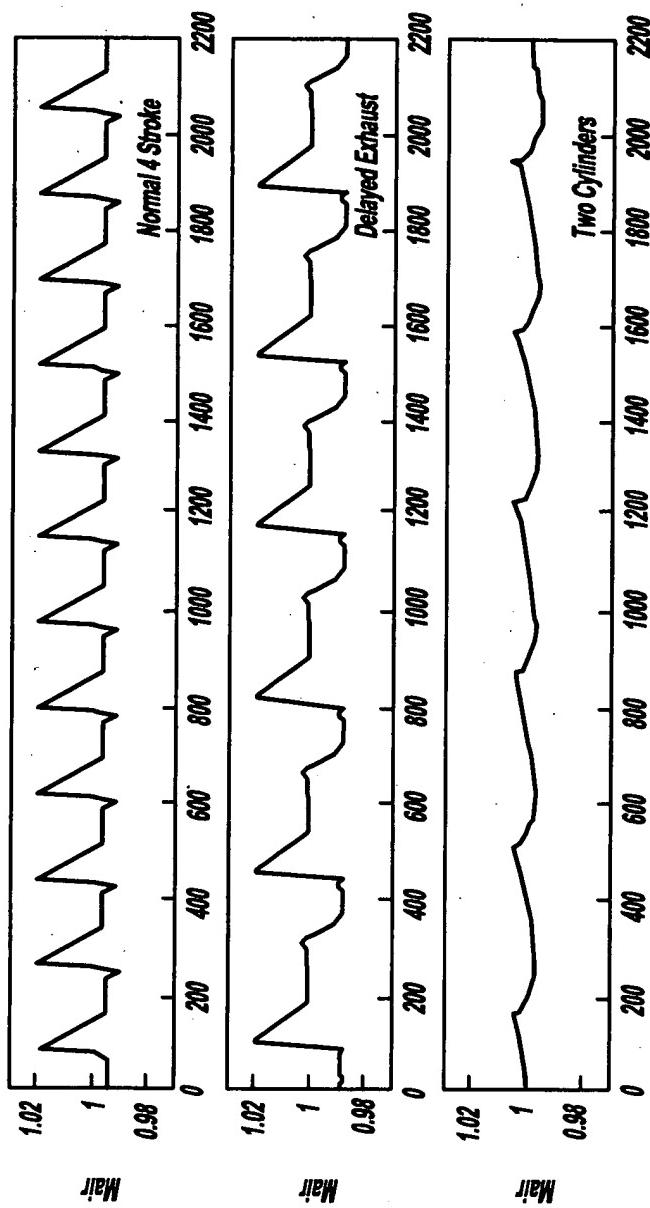
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**FIG - 41**

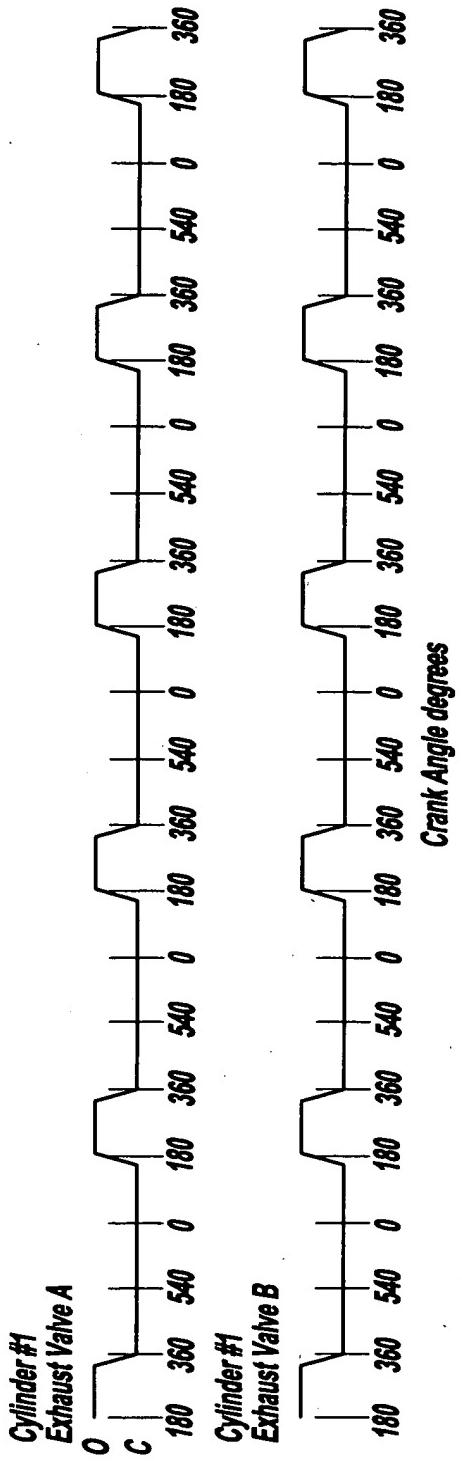
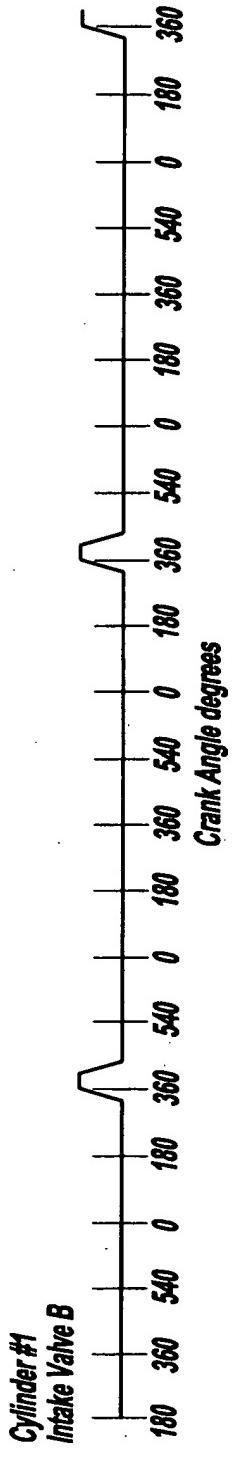
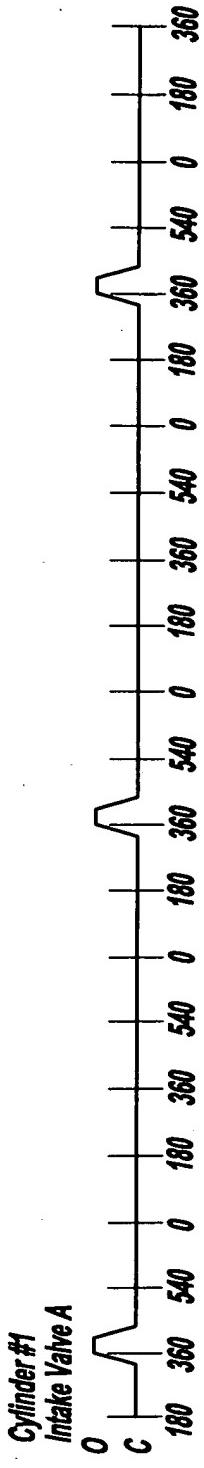


**FIG - 42**

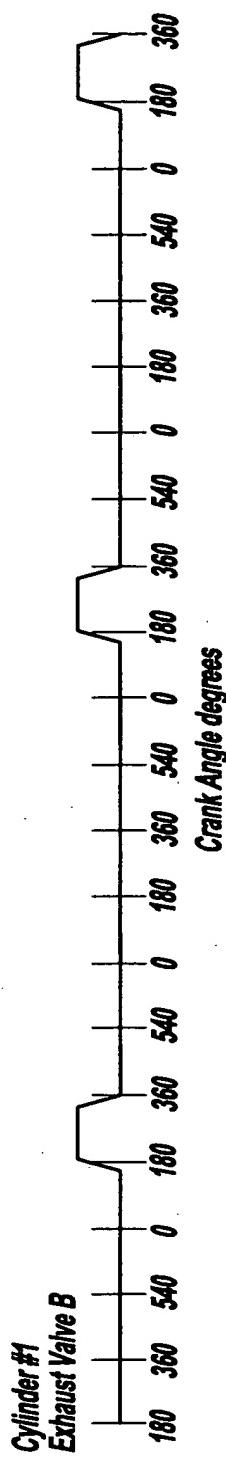
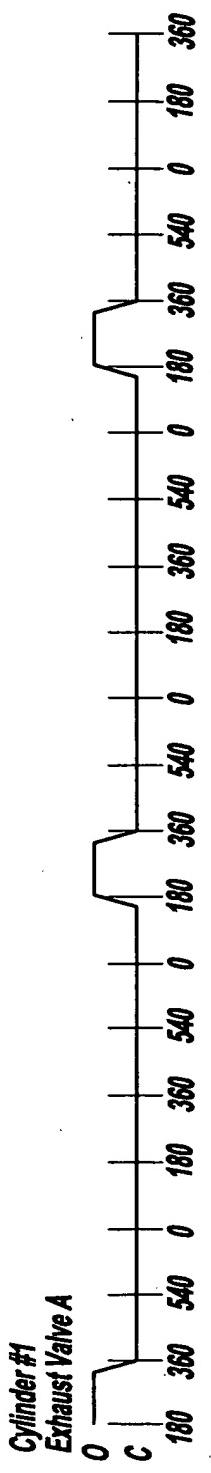
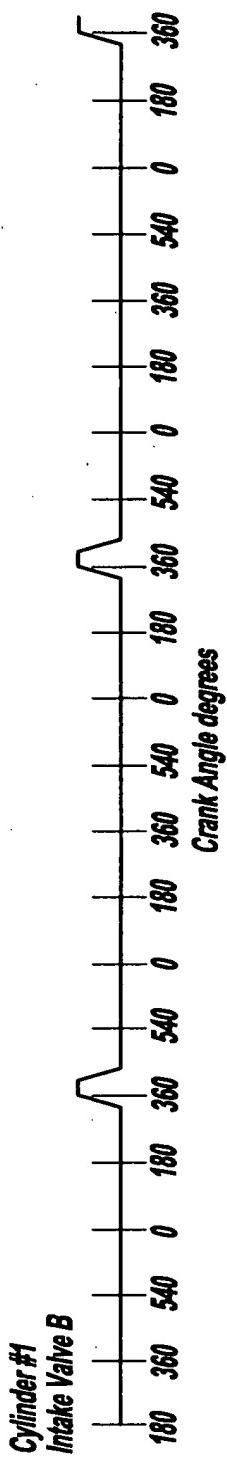
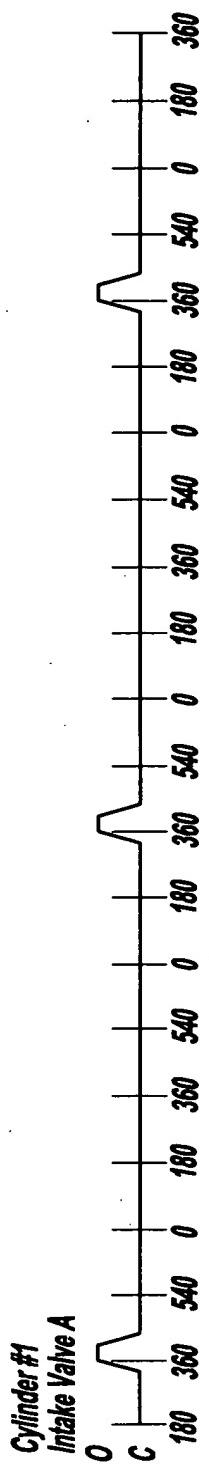


**FIG - 43**

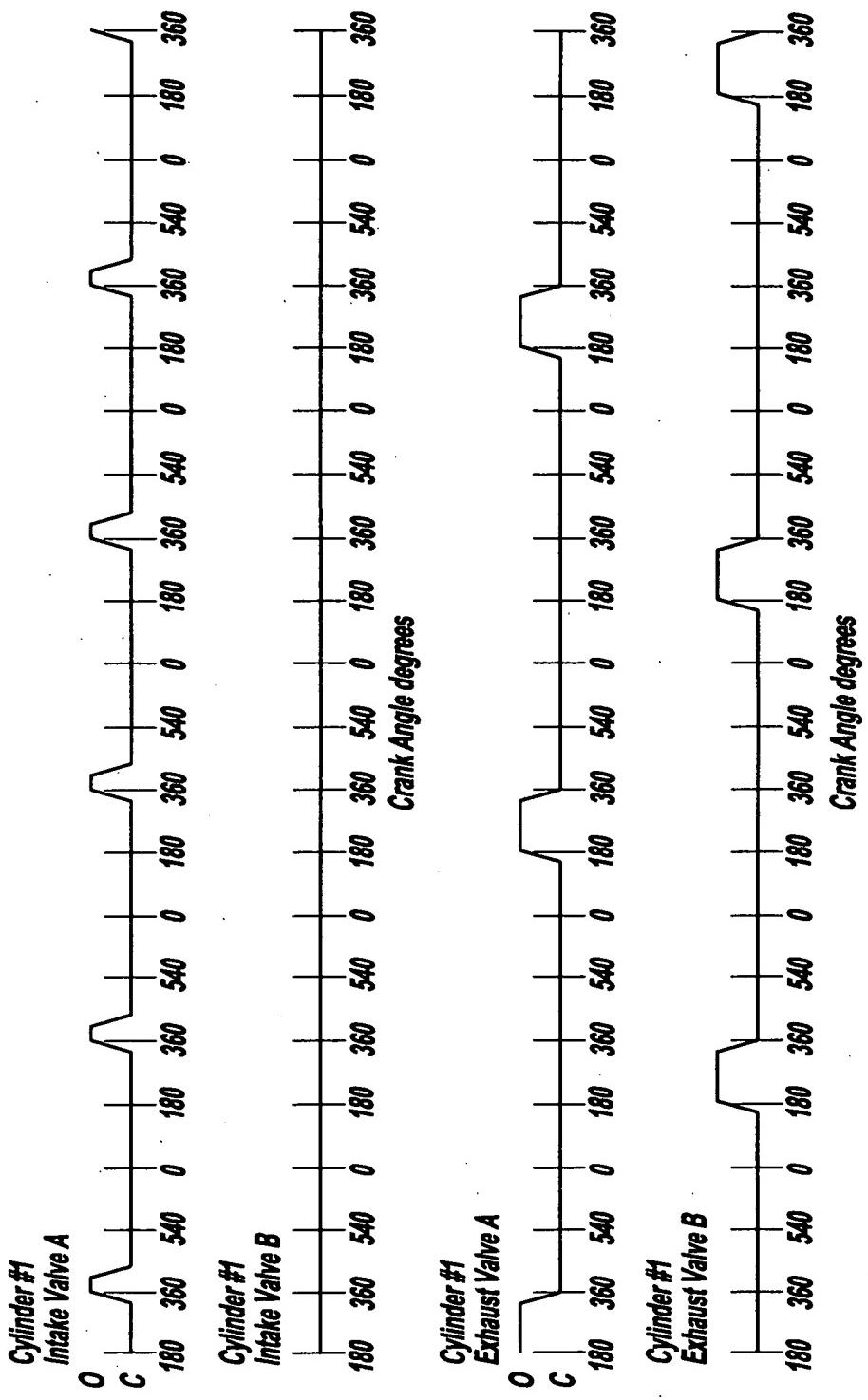
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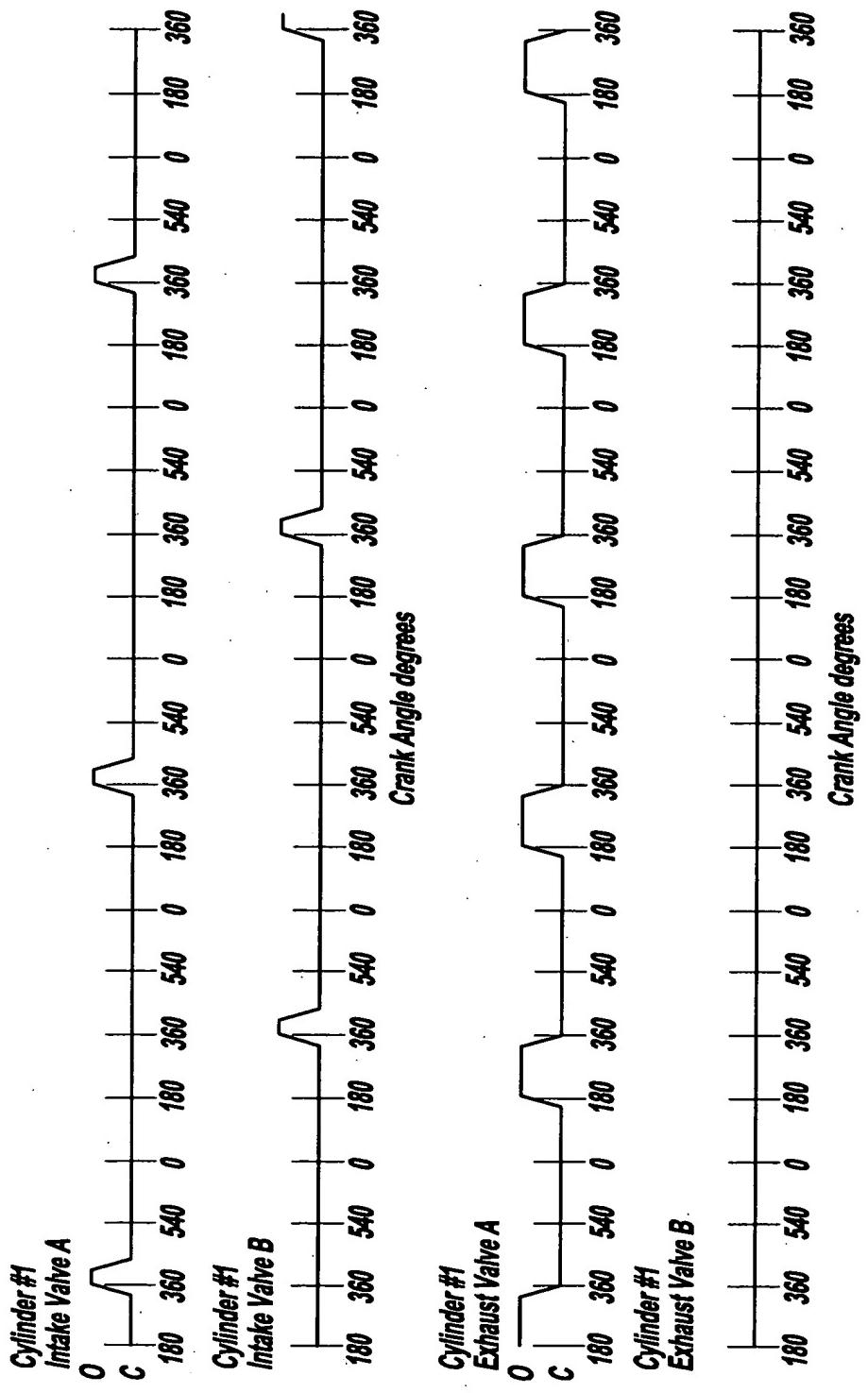


**FIG - 44**

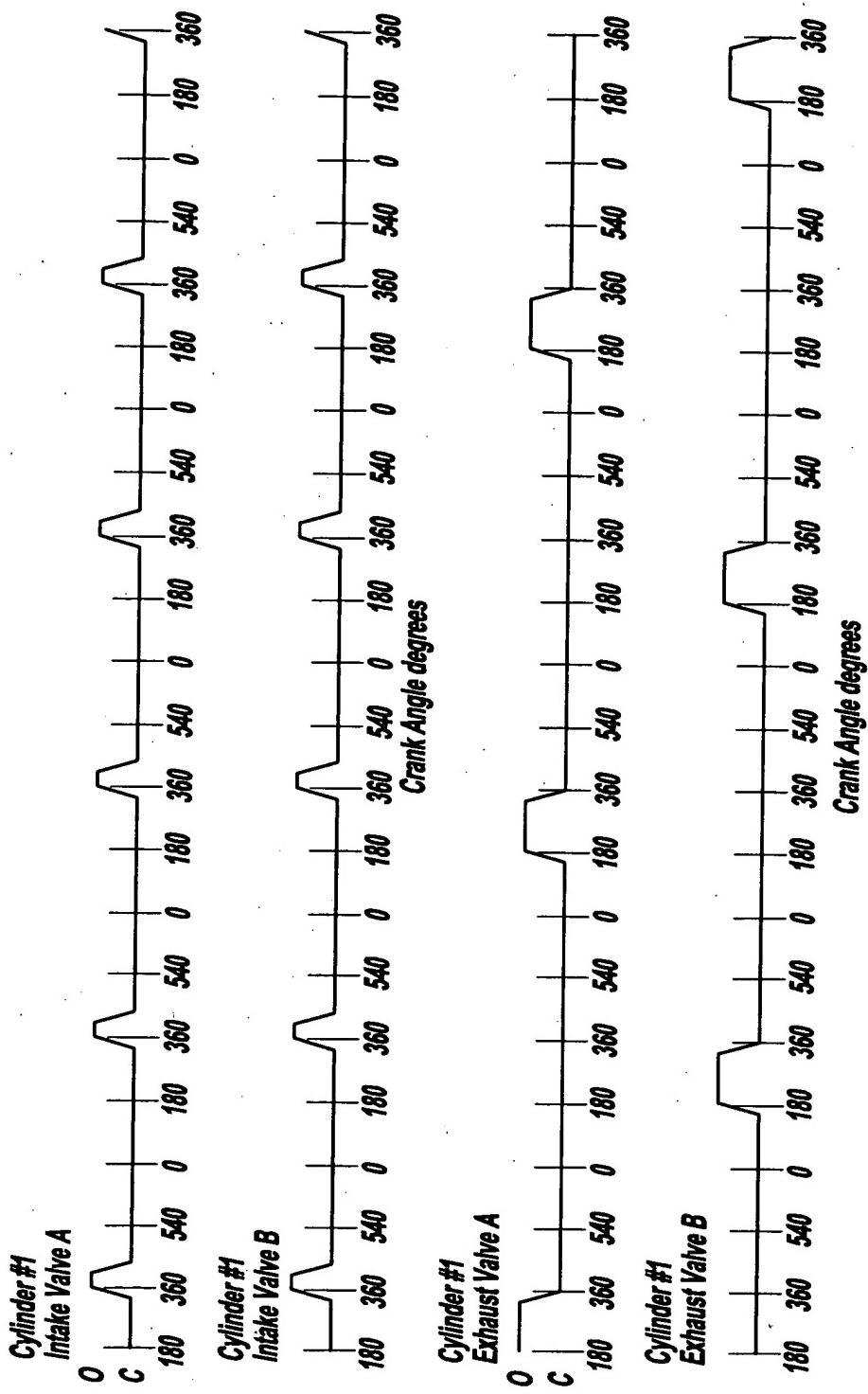


**FIG - 45**

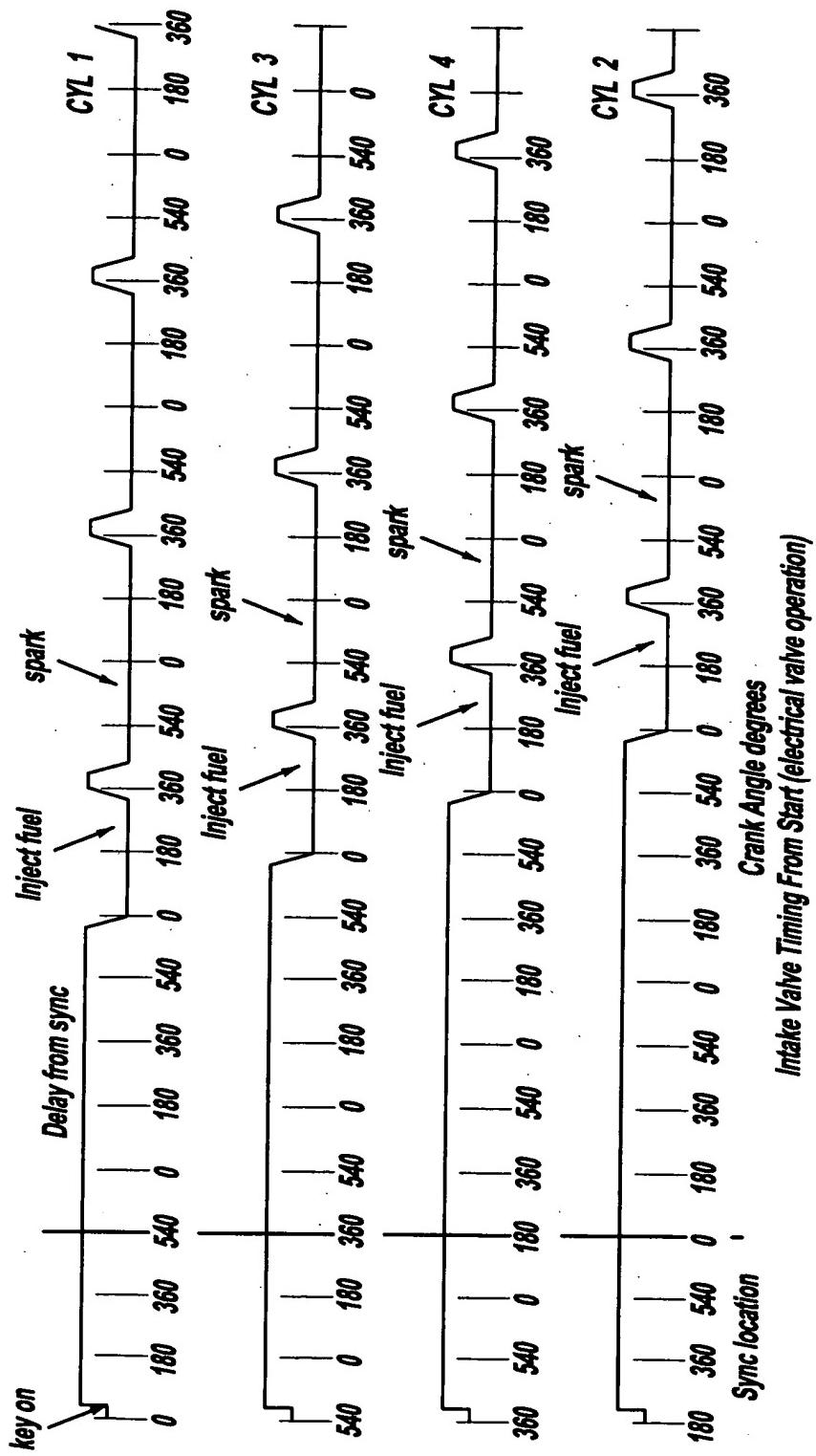
**FIG - 46**

**FIG - 47**

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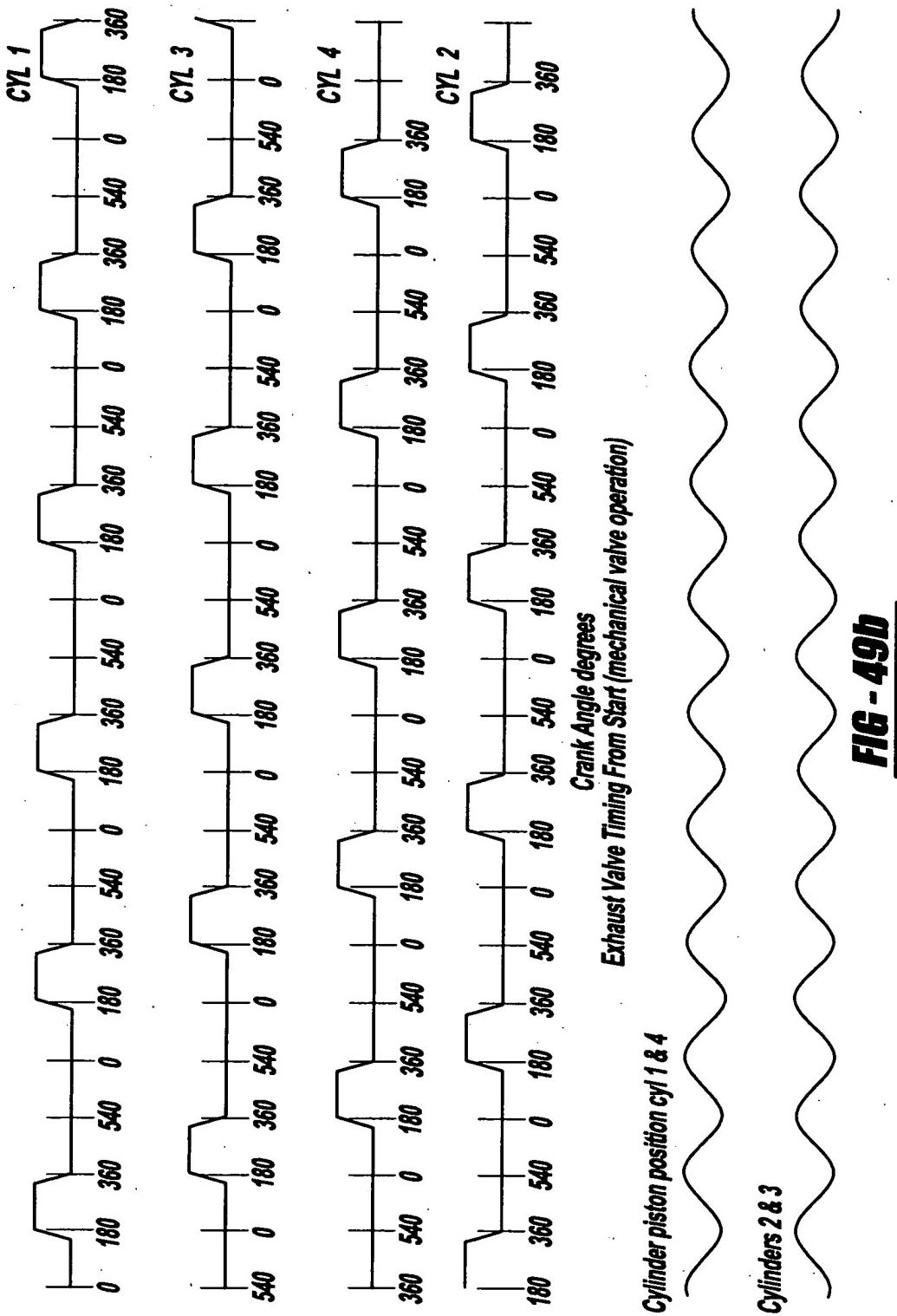
**FIG - 48**

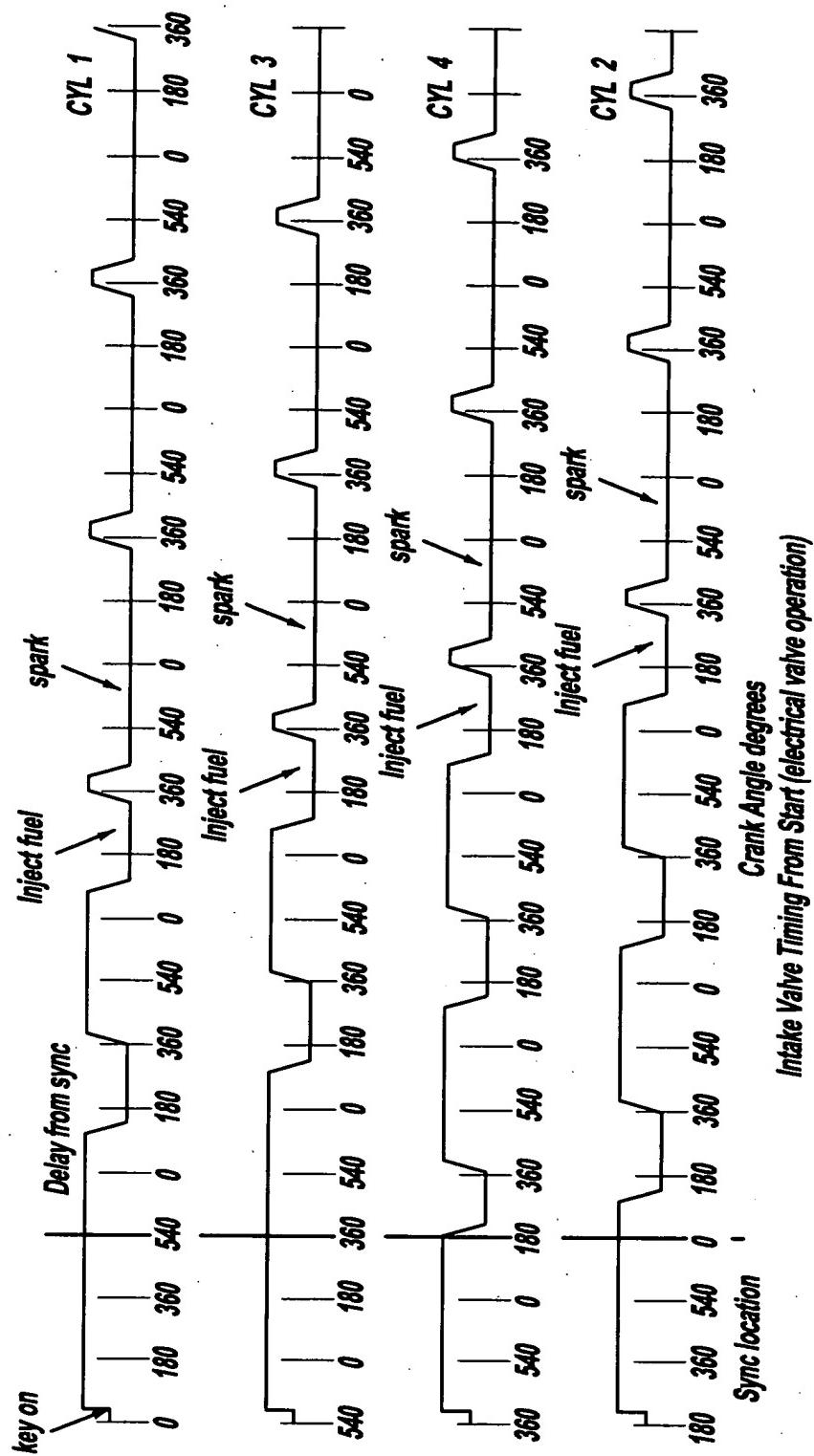
**FIG - 49a**

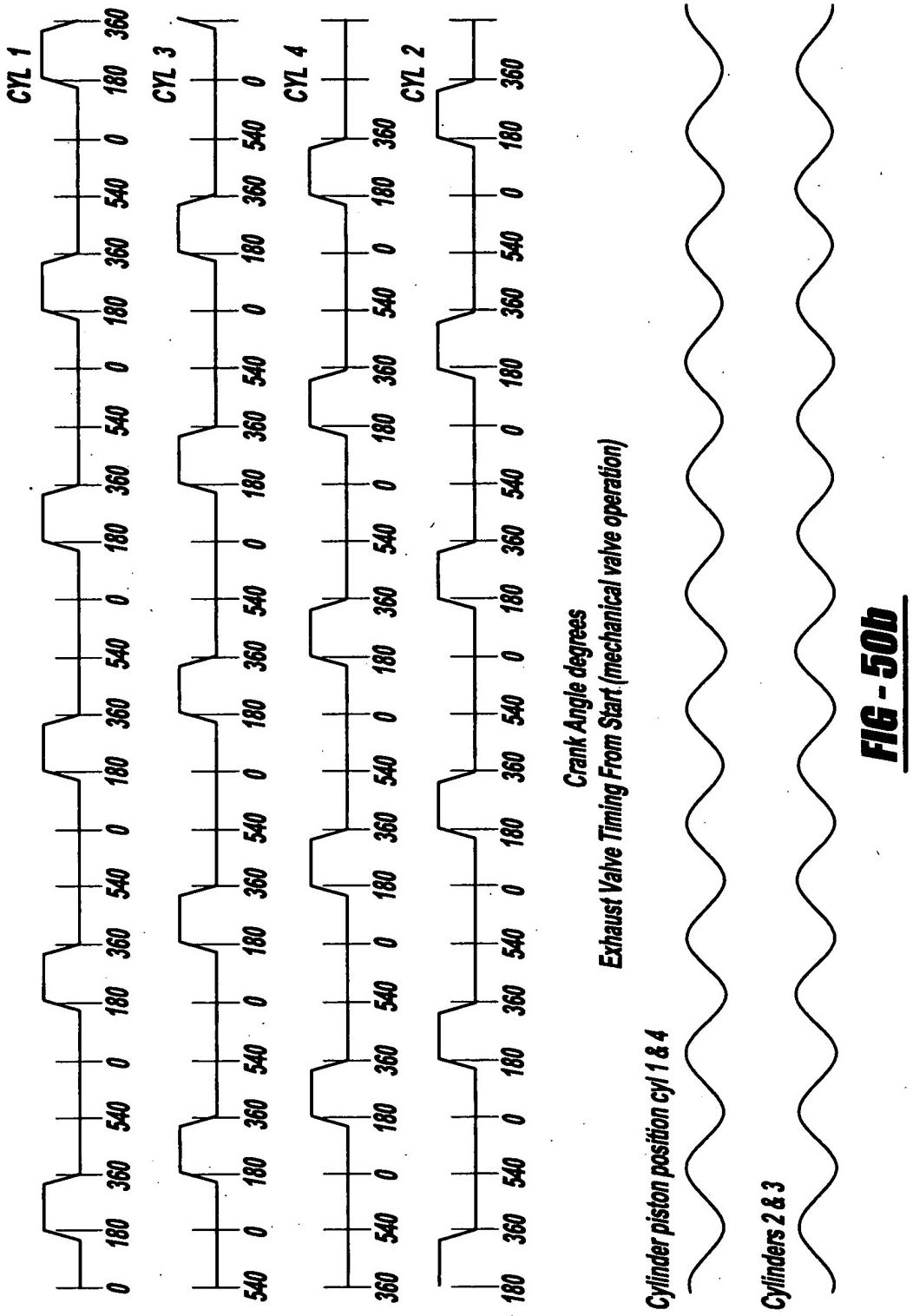
*Intake Valve Timing From Start (electrical valve operation)*

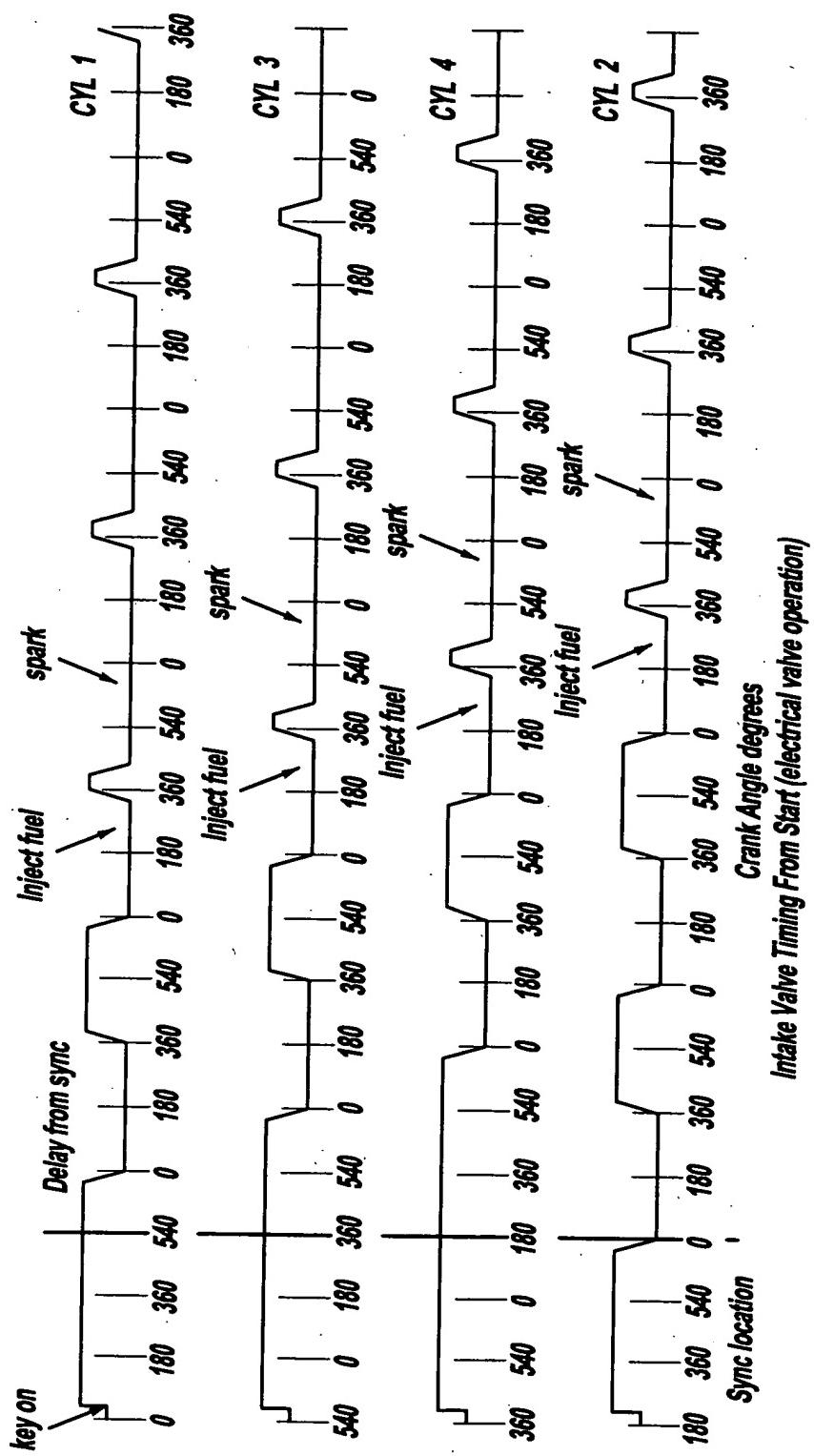
*Crank Angle degrees*

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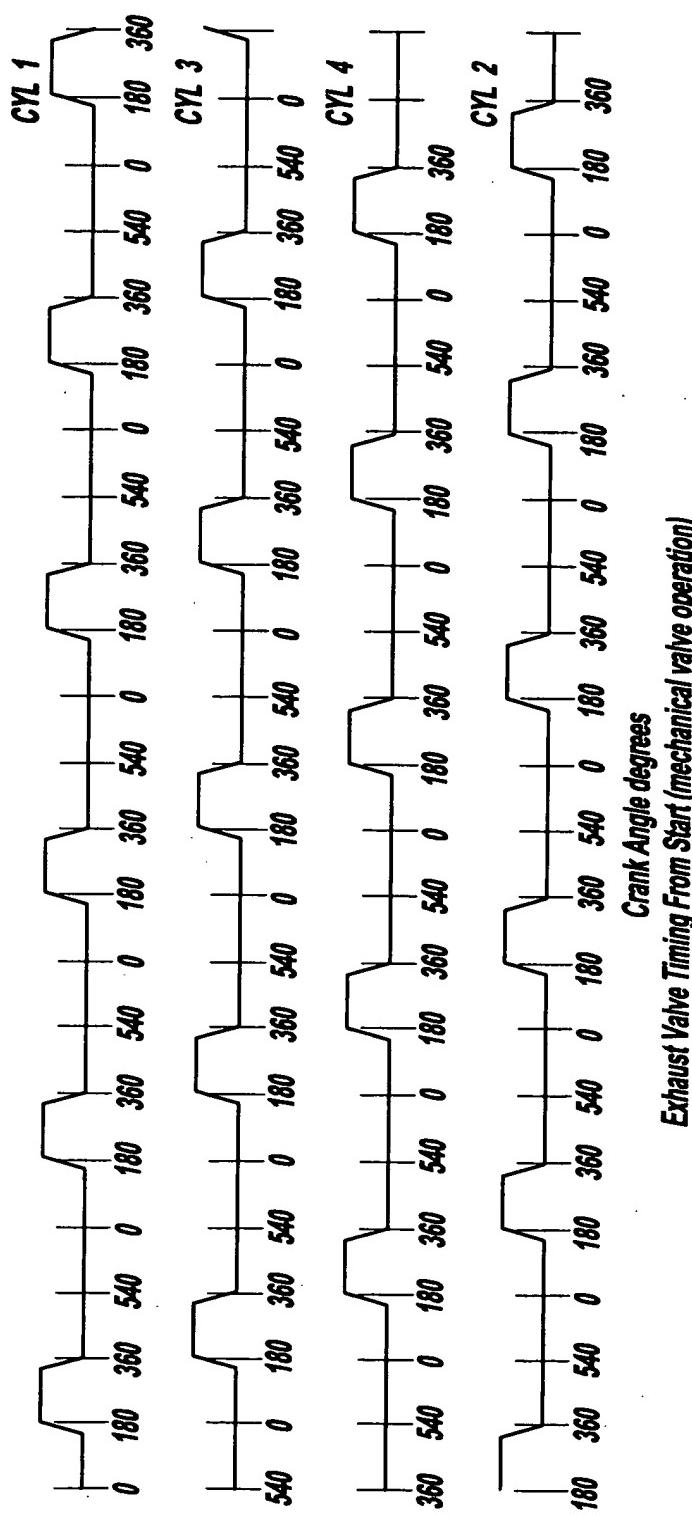
*Intake Valve Timing From Start (electrical valve operation)***FIG - 50a**





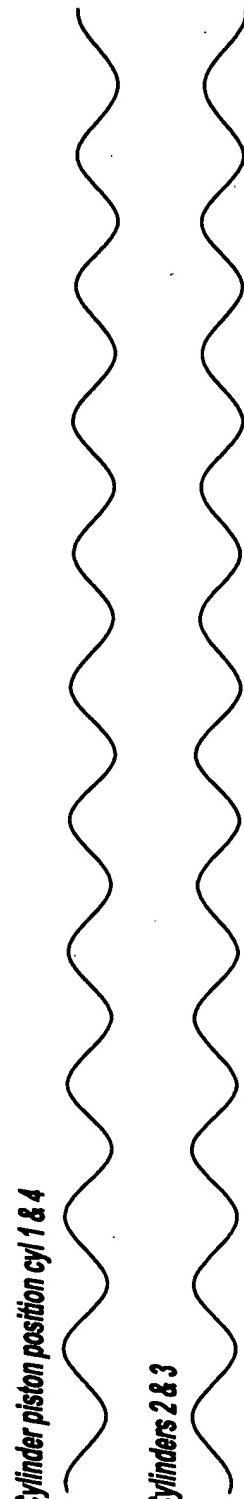
Intake Valve Timing From Start (electrical valve operation)

**FIG - 51a**



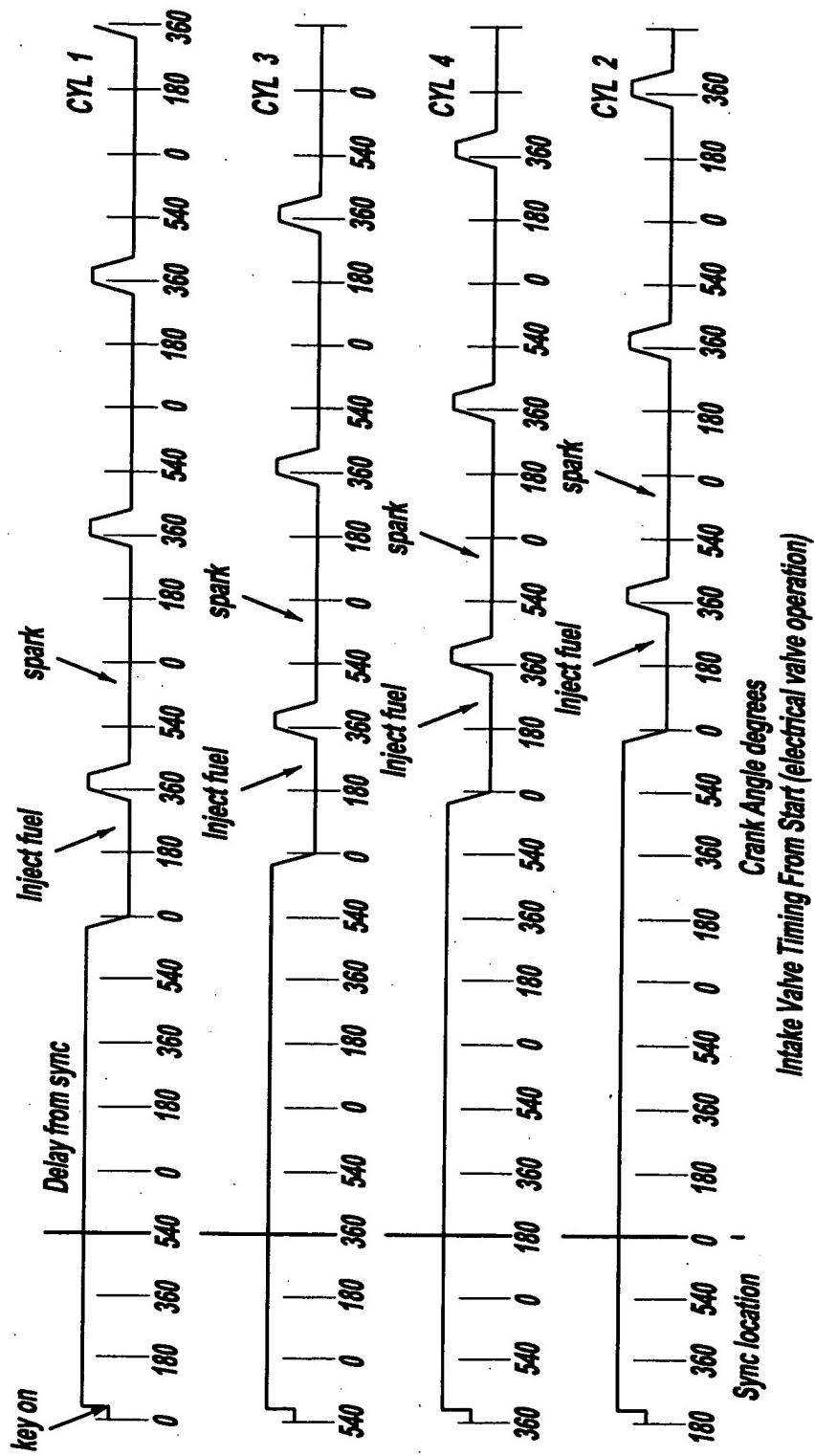
*Cylinder piston position cyl 1 & 4*

*Exhaust Valve Timing From Start (mechanical valve operation)*



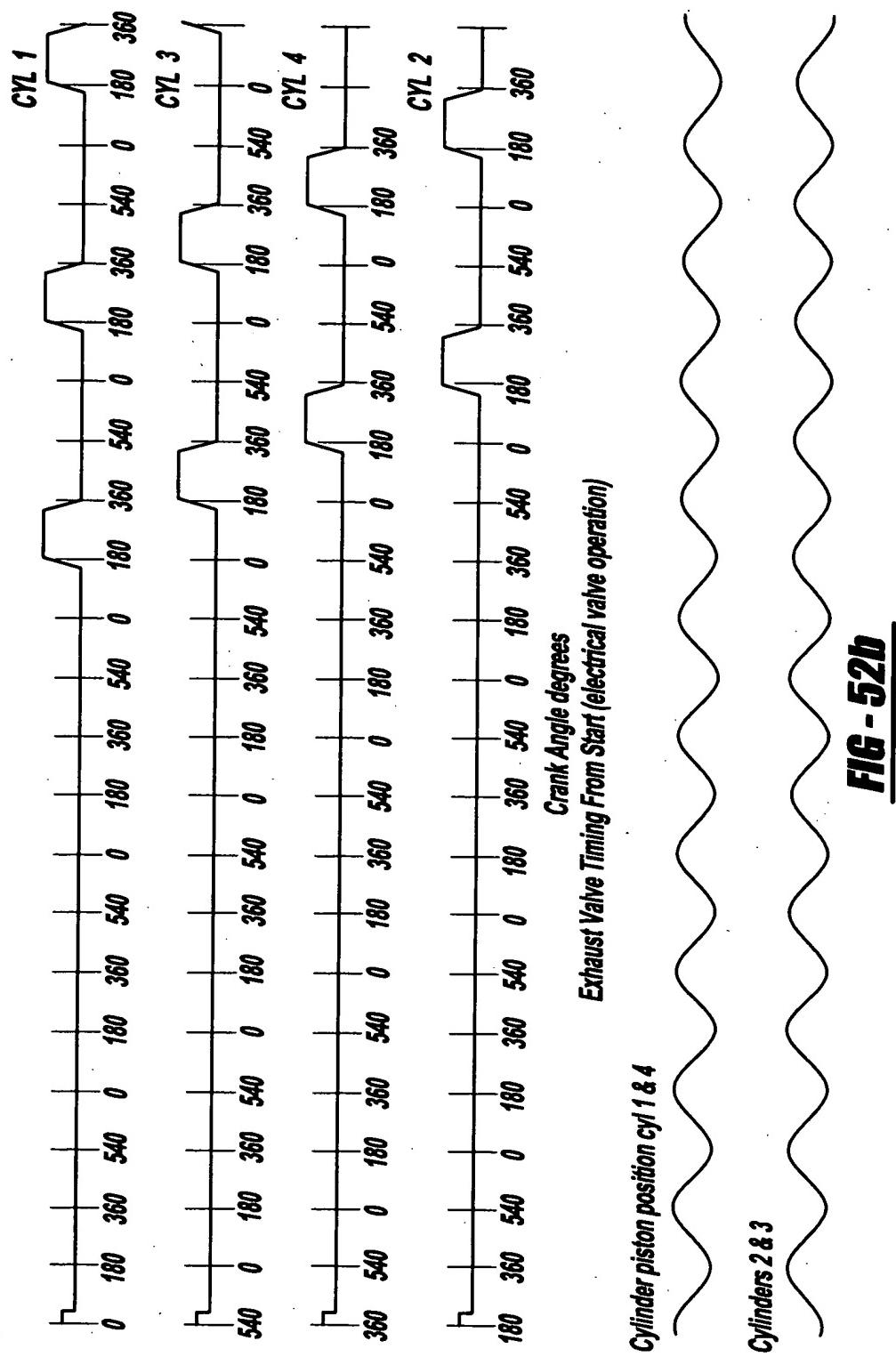
*Cylinders 2 & 3*

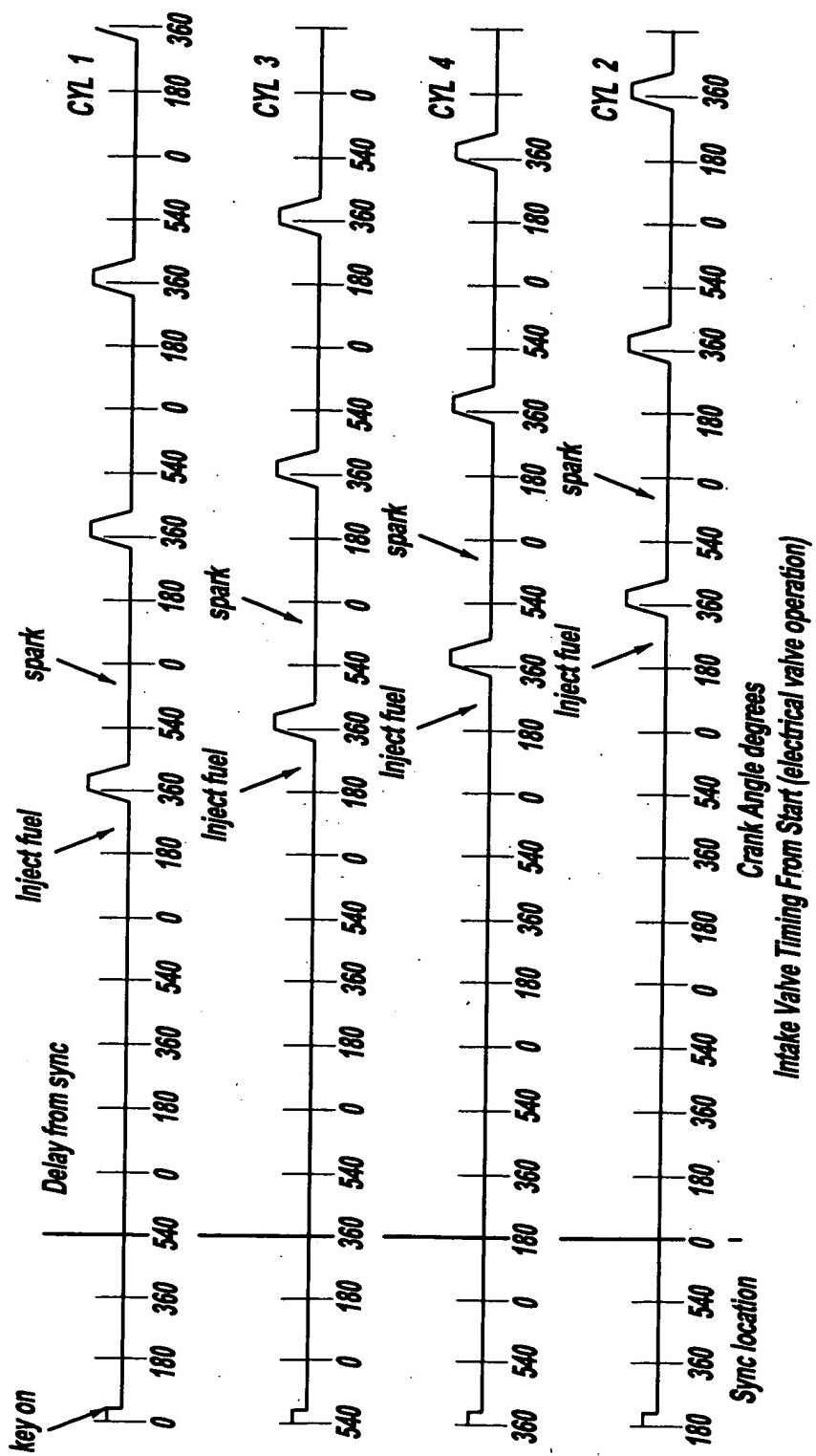
**FIG - 51b**

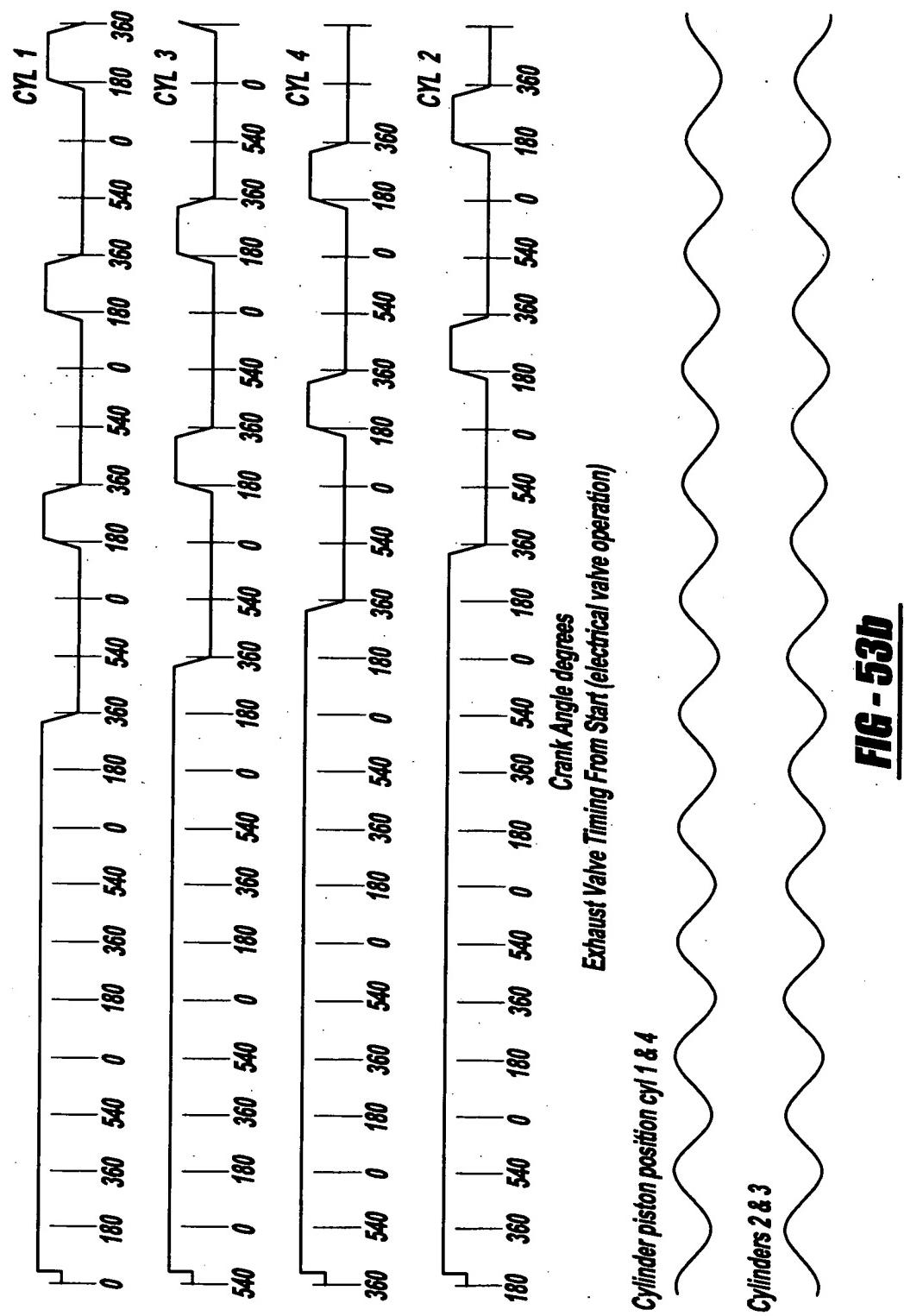


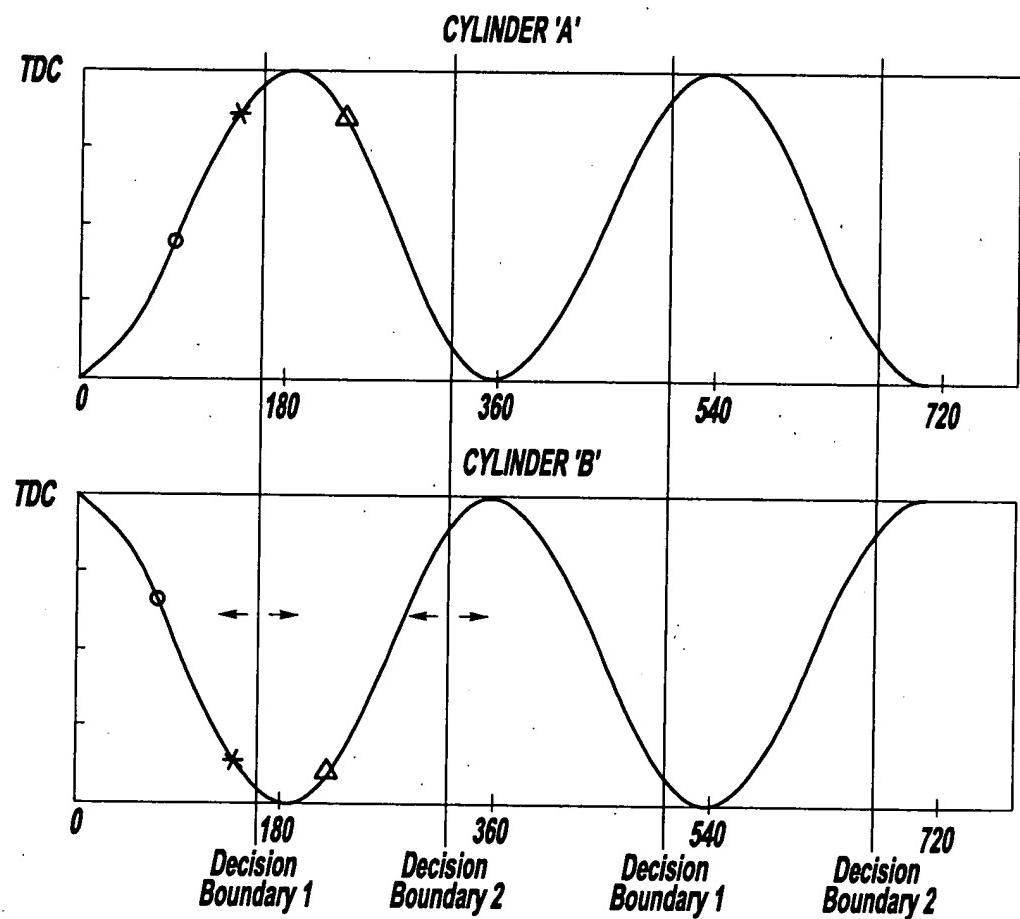
## **Intake Valve Timing From Start (electrical valve operation)**

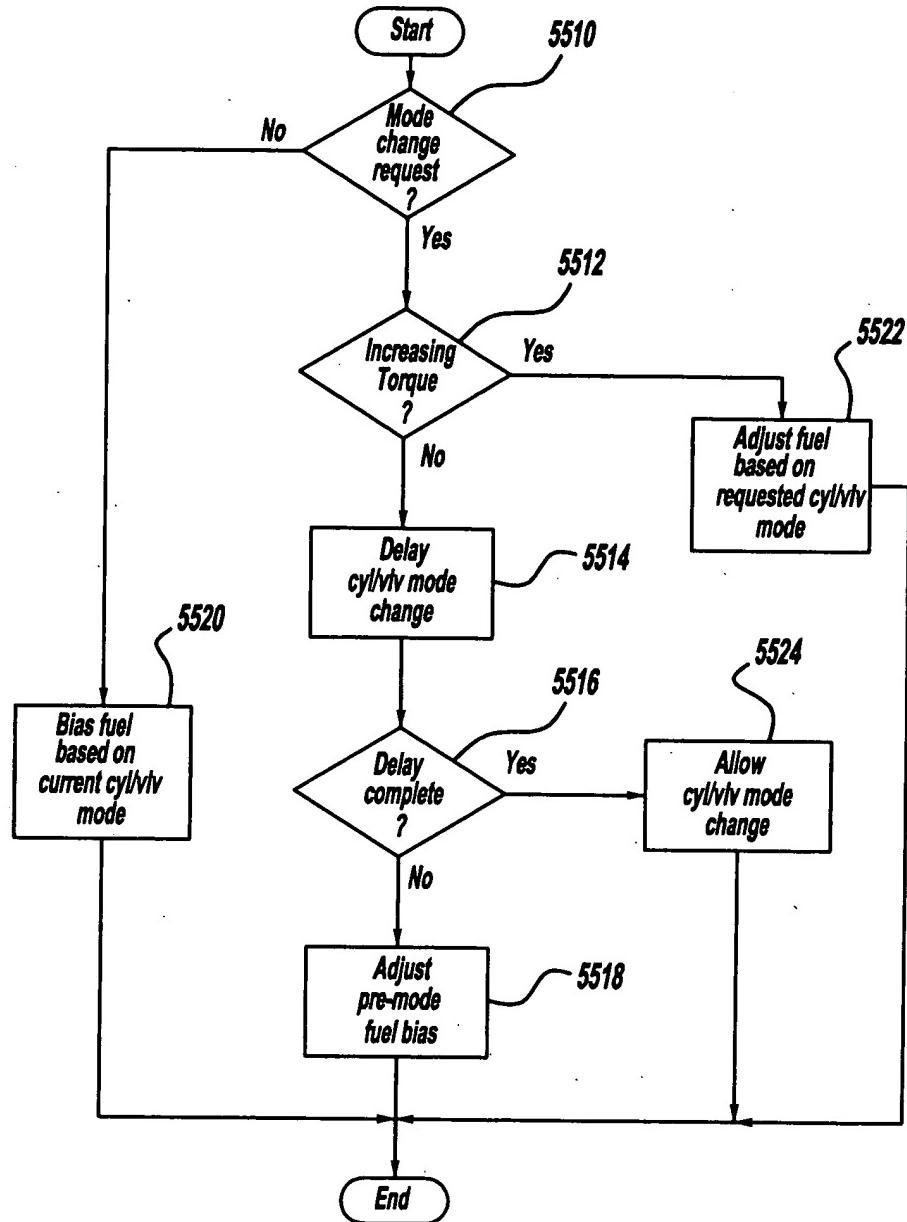
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**FIG - 54**

**FIG - 55**